

THE *Soybean Digest*

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How to Whip the Weed Problem

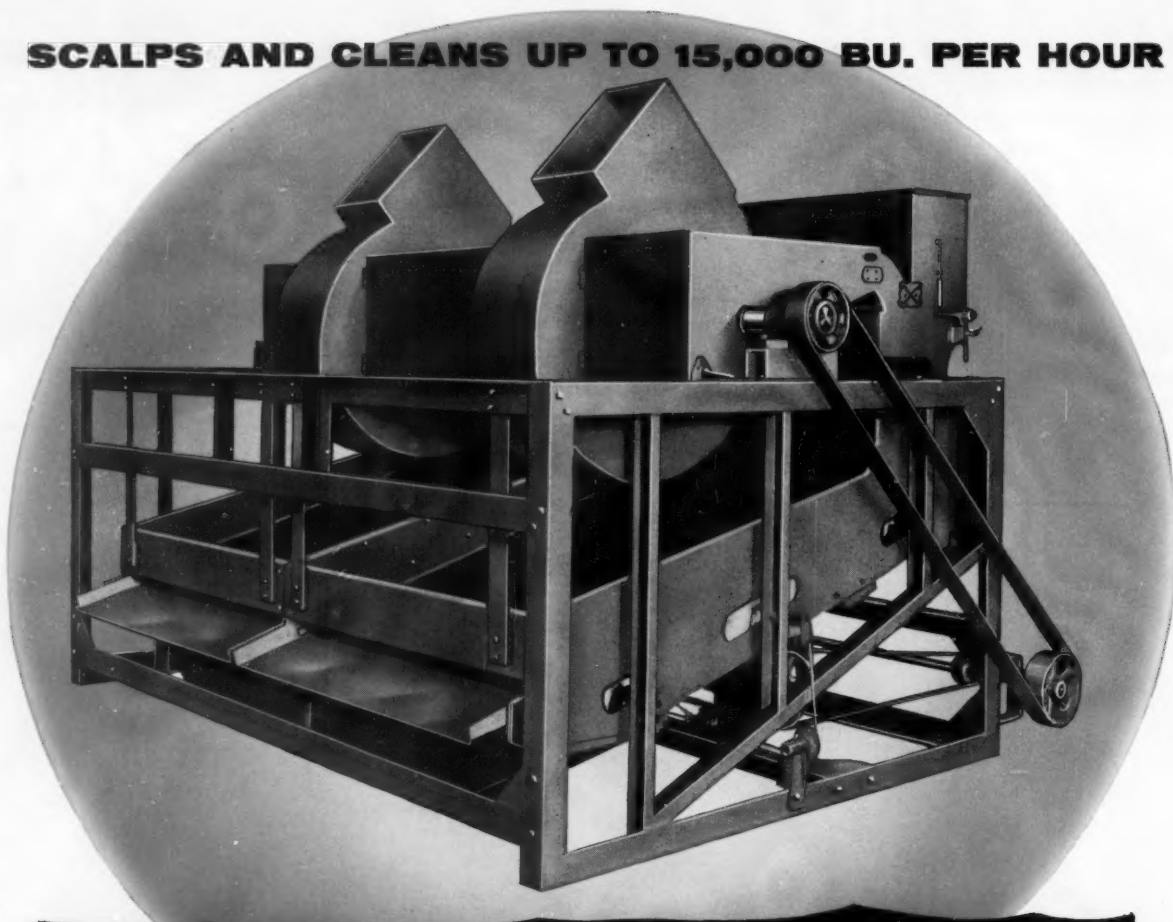
**The Soybean
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Make Use of
Futures Markets**



VOLUME 17 • NUMBER 6

APRIL • 1957

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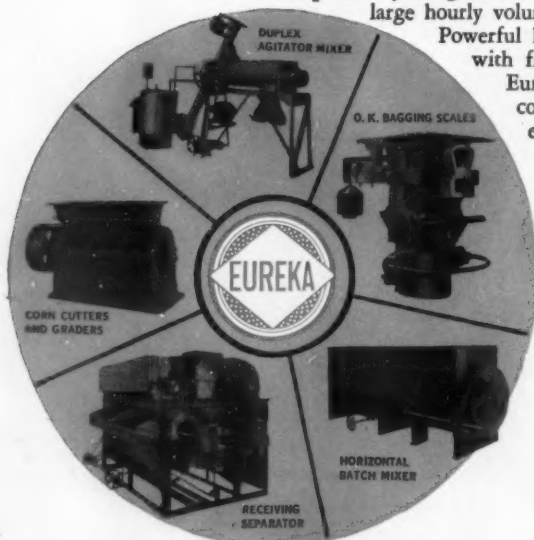
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Vol. 17

April, 1957

No. 6

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available information relating to both the
practical and scientific phases of the prob-
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EDITOR'S DESK

By GEO. M. STRAYER

90-MILLION-BU. INCREASE IS TOO GREAT

March 1 planting intentions on soybeans indicate an even greater acreage than in 1956, to your editor's amazement. Several factors that may affect that acreage are still undetermined—including the influence of weather.

However, it does appear that inability of Congress to agree on a corn program which could be passed and which would be workable may increase the corn acreage, at the expense of projected soybean acreage. Should unfavorable planting weather prevail, and the season grow late, as now appears in some areas of the South, the soybean acreage could be increased at the expense of those crops that do not get planted.

No matter what the influence of corn programs may be—or the lack of corn programs—and no matter what the effects of weather may be, it does appear that we will have plenty of soybeans to fill our 1957 crop needs, unless catastrophic weather interferes.

This year, for the first time in history, it now appears we will have sizable government stocks of soybeans hanging over the market when new crop movement begins. If governmental stocks are moved into export channels it will probably be at the expense of what would otherwise be sales from 1957 crop. If they are not sold, the disposal program will be announced as of Oct. 1, 1957, and that will affect the new crop market.

It does appear that for the first time serious thought should be given to any projected increases in soybean acreage in new areas—or even on Midwest and Midsouth farms. We can absorb more acres and more bushels of soybeans—if we will do it gradually and intelligently. These 90-million-bushel increases in 1 year are too much to ask any industry to absorb without serious repercussions.

Let's keep our industry on an even keel—keep acreage within bounds—and continue to sell our own products. The alternative is Uncle Sam as the buyer and warehouseman. That is something none of us wants.

APPARENT DISPOSAL PROBLEM

The monthly crush of soybeans turned into oil and meal in U. S. plants continues to exceed all previous records. Soybean oil meal continues to flow into the livestock feeding channels in unprecedented quantities. No sizable stocks of meal exist even today. Prices on meal have been the lowest in years—as was anticipated and planned

in order that consumption might keep ahead of supply.

Oil markets, however, have not kept pace. Effects of export purchases both for dollars and for foreign currencies under P.L. 480 wore off, and the oil market sagged. Bean prices also sagged. Hovering at just about support levels, prices have not been conducive to selling by farmers. Chicago warehouse stocks continue to shrink. For practical purposes trading almost stopped when the market sagged.

It now appears that on May 31 the Commodity Credit Corp. will take over sizable stocks of soybeans. Had vigorous action been taken in merchandising oil the market would probably have been supported to the point where soybeans would have been redeemed and sold, staying out of CCC stocks. It appears now that unless drastic action is taken Uncle Sam, for the first time, will have a disposal problem on soybeans.

The tragic thing is that it could have been prevented if earlier action had been forthcoming. A few thousand tons of oil sold at the right time would have done the job. Now it may be too late. The cost of supporting an oil market would have been far lower than the cost of supporting the soybean market.

JAPANESE PROGRAM EXPANDED

The work of the Japanese-American Soybean Institute is to be continued for another 2 years. Approval on a tentative basis has been given by Foreign Agricultural Service. Signature on the agreement is expected before this issue reaches you.

Japan for several years has been our largest customer for American soybeans. It should continue to be our largest customer. The need for far greater quantities of soybeans than are now being imported exists within Japan. Shortages of dollars, restrictions on the entry of Japanese goods into the United States, and a desire to channel trade to nations which offer potential markets for Japanese goods, all play a part.

Our market for American soybeans will be just as large as we are willing to make it, based on the efforts we are willing to put into the development and the promotion of markets. The Japanese trade groups that participate in the Japanese-American Soybean Institute, along with the American Soybean Association, are willing and eager to cooperate. The new and expanded program calls for increased emphasis on the edu-

cational work, and on the actual promotion of product usage by the Japanese people. It should be mutually profitable to all concerned, both in Japan and the U.S.

Only one stumbling block remains. Only as many soybeans are imported as the governmental allocation of dollars will buy. The Japanese government has the final say on purchases. Our hope is that we may create such pressures of demand as will make it desirable for the Japanese government to increase the allocation of dollars even beyond that presently contemplated.

PROGRESS IN ITALY AND SPAIN Negotiations with Spanish trade groups on the market development program on soybean products, utilizing certain P. L. 480 funds, have been under way. Italian negotiations will be instituted shortly. Both programs, being carried out by the Soybean Council of America, Inc., are aimed at developing a continuing market for American soybean oil and soybean oil meal in the countries concerned.

It is anticipated that announcements pertaining to the details of operation of both programs will be ready shortly. Any program designed to sell products in a foreign country must be adapted to the customs, trade practices, distribution systems and needs of that country. American methods may or may not work in a particular country. Careful study and planning must be given to any

program that is to be successful. Without it there could be nothing but failure.

The trade groups within a country through which a commodity flows into normal channels of consumption are very important in a successful market development program. It is the negotiations with these groups in both Spain and Italy that are under way now.

OPPORTUNITY FOR AMERICAN SOYBEAN MEAL The Verona Agricultural Fair exhibit is covered elsewhere in this issue. To Howard Roach and Jim Hayward, along with Kenneth Krogh, Charles Witt and the other men in the International Trade Fairs Branch of the Foreign Agricultural Service, should go the thanks of our industry. If Italy has a budding livestock industry and is going into the production of poultry products in a big way, as has been indicated, then soybean oil meal and especially high protein meal, should be utilized in increasing quantities in the Italian economy.

Results of a display of this type are always hard to measure. There is no way of determining what would have happened without the exhibit. So long as our industry has products to export, and so long as our prices are competitive, we must continue to acquaint the potential buyers of the world with our products. Fair exhibits are an excellent way of doing so.

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Soybean Producers CAN Use the Futures Market

The soybean farmer can insure a satisfactory price through proper use of futures

By FRED CLIFTON

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THE MODERN FARMER is well aware that the big futures markets exist. Too, that the grain trade has used these markets extensively for hedging.

In fact, at times it is only because hedging facilities are available that processors and country elevators are able to pay farmers the prices they do; without hedging they would have to lower their prices to the grower to allow themselves a greater margin of protection. Certainly, availability of hedging facilities has contributed to the trade's capacity to absorb sales whenever farmers want to sell.

For soybeans, futures markets now exist in soybean oil and soybean meal, as well as soybeans, allowing the trade a wide selection in placing its hedges.

The farmer, too, should know enough about the use of soybean futures to be able to adopt some of its benefits into his own price and marketing ideas. The main thing for the farmer to understand, and thus gain confidence to utilize it, is that futures markets cannot for long move substantially in one direction while cash soybean prices go in the other.

In the past two seasons, cash and futures have been able to diverge only in the final month or so of each

expiring crop year. Otherwise, there is a very orderly seasonal relationship as indicated in the accompanying chart.

Once the farmer is aware of the seasonal pattern and why it occurs, any mystery about futures evaporates. He then has a many-faceted tactical aid to add to his marketing procedures.

As it is now, the farmer plans his soybean production as a cash crop to fit into good farm practice and costs, and in line with government loan prices. By orderly marketing in recent years, and use of storage and the loan, he has limited the harvest time price weakness in a reasonable way. Still he must judge the trend of prices from then on, if he is to obtain the best price for the season instead of merely the loan price. But there are many other persons trying to judge this price and, once the season's supply is known, a great part of the demand that takes place depends on ensuing events. These happenings are not easy to forecast, especially the exact timing of them. Government action on foreign aid plans is but one of many factors that come quickly to mind; and weather for the next crop, of course.

Farmers thus are always planting for next season's market while still greatly under the influence of the current situation. Along these lines, then, follows a detailed illustration

of one way a farmer can use futures. (Incidentally, this type of operation is referred to as being among the bona fide hedging transactions in the Commodity Exchange Act.) Last spring's situation is used but it is by no means an isolated occurrence, and the same type action could be taken up to 12 months ahead of harvest in new crop futures.

How to Use Futures

How a farmer can use futures to assure a given return on his crop (referred to herein as a "hedge"):

June 15, 1956, a farmer notes that new crop January soybean futures at Chicago are selling for \$2.60 a bushel. He figures it equal to about \$2.40 local cash value, when handling and freight costs are deducted, and the average discount of cash under futures at harvest time is allowed. Seeing a big crop in view and knowing his farm loan will be \$2.18 he figures a price next season around \$2.40 would give him a good return on his growing crop. He expects his crop to yield approximately 4,000 bushels—he therefore sells 4,000 bushels of January futures at \$2.60, value \$10,400. He doesn't actually receive this dollar amount. This is merely an accounting credit. (There are no 4,000-bushel contracts on futures exchanges. Contracts are in units of 5,000 bushels and 1,000 bushel job lots in soybeans, so that his sale was four jobs.)

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was assured of this price at the time he sold futures as he thereafter no longer had the risk of price changing against him. His objective of a profitable return on his crop had been achieved.

Even if a producer is a member of a cooperative, he can use futures in the above way except he would repurchase futures when the cooperative sold his crop.

In addition to the outline of the strict hedge described above there are almost endless variations on the theme. For instance, in Result 1 there is nothing to prevent him from buying back the futures, calling it a profitable speculation, and instead of selling the crop at that time merely use government loan as a hedge while waiting for an upturn in price later in the winter. Or even to wait until the cash price improves its relationship to the loan, providing storage space is not a problem.

Results with 1954 Crop

Let's take a specific recent situation. In November 1954, under a different set of circumstances, futures were at a high price right after harvest. May soybean future touched \$2.99 in the first week of November. Illinois country shipping point prices then averaged \$2.74; the distant future could have been sold around \$2.95-\$2.99 thus virtually assuring the price the farmer would get for his cash soybeans at around \$2.75. Actually, the crop was held back and sold for cash only when it improved its relationship to futures. In this case the futures declined more than cash did, and he netted more than he lost in the smaller cash decline. The hedge was ended when the cash grain was sold and futures were bought back. This "basis" move from 13¢ under futures to 4¢ over futures or a 17¢ total from November 1954 to March 1955 is shown in the chart at the beginning of this article. This type of operation is akin to trade usage and helps earn storage costs for farmers.

The other side of the strict hedging situation, where a cash sale is arranged to be filled later and futures are purchased and held until

the cash article can be obtained or harvested, is more applicable to the trade or exporters than to producers. But there are adaptations not strictly hedges. For example, if after a farmer's cash soybeans were sold, at what was then a satisfactory price, say the situation changed to prospective tightness; then the cash inventory could be easily replaced by purchasing an equivalent amount of futures. True, this is an outright speculation, but so is holding cash soybeans after the loan is no longer available. The futures purchase could be quickly liquidated or losses

held to a given amount should the scarcity not evolve.

Just a note about hedging through a broker or commission house—when a farmer sells futures contracts he is required to deposit an amount, usually about 10% of the current price, as original margin. And if the market advances sufficiently later on, additional margin might be required. But his banker should have no hesitation in financing the necessary margin amounts since the soybeans would be safely hedged, and no one can renege on a futures contract.

Fertilizers May Pay in Ark. Rice Area

FARMERS IN the rice-growing areas of Arkansas may find it profitable to fertilize for their soybean crop provided their soils are low in phosphorus and potash, as reported by Delta Farm Press.

Results pointing to this conclusion were obtained in research studies carried on by the University of Arkansas' Agricultural Experiment Station. The tests were conducted on cooperating farms located in eight eastern Arkansas counties, and included varieties commonly grown in the area.

Soils that tested medium to high in phosphorus and potash and had a favorable lime content did not respond profitably to fertilizer application for soybeans. Much of the Mississippi Delta soils of eastern Arkansas fall into this category.

Sandier soils and silt or clay loams of the Rice Prairie regions gave good response to phosphorus and potash applications of 200 to 400 pounds of 0-10-20, 0-20-20, or 0-20-10, depending on the phosphorus and potash soil test levels.

Applications of phosphorus and potash were profitable as long as the preceding crop was not fertilized heavily.

Banding fertilizer a few inches to the side or below the seed row proved more effective than broadcasting before seeding, but good re-

sponse was obtained from either method on deficient soils.

In some cases, sidedressings were effective only when followed by adequate rainfall or irrigation.

Nitrogen sidedressings, as either anhydrous ammonia, nitrate of soda, or ammonium nitrate, failed to increase bean yields although vegetative growth of leaves and stalks was better where nitrogen was applied.

These tests on the Delta and Rice Prairie soils were carried out from the eastern Arkansas branch of the Agricultural Experiment Station's Soil Testing and Research Laboratory. Dr. R. L. Beacher of the Experiment Station staff was project leader.

Honor USDA Scientists

A GROUP of research scientists at the Southern Utilization Research Branch, USDA, New Orleans, La., received USDA Superior Service Awards recently for development of the filtration-extraction process for separation of oil from cottonseed, soybeans, and other oilseeds.

Recipients include E. L. D'Aquin, P. H. Eaves, H. K. Gardner, Jr., E. A. Gastrock, L. L. Holzenthal, N. B. Knoepfler, J. J. Spadaro, H. L. E. Vix, and A. V. Graci, Jr.

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OPPOSES FREIGHT INCREASE

The American Soybean Association is opposing a 22% increase in freight rates that would affect soybeans and soybean products as well as other farm products, asked by nearly all Eastern and Western railroads and some Southern railroads. Emergency increases of 5% to 7% were granted recently by the Interstate Commerce Commission.

In a statement filed with the Commission in Washington Mar. 25 opposing the increase, Geo. M. Strayer, executive vice president of the American Soybean Association, stated: "A further freight rate increase will bear heavily on the nation's soybean producers who in recent years have been faced with steadily declining farm prices—and this includes lower prices for soybeans—and constantly increasing costs . . . Transportation costs have been absorbing an increasingly substantial part of the total income from the farm. . . There is no way in which the farmer can pass these costs on to the consumer of the end products. **He must absorb them himself**, and as a result his standard of living has been steadily lowered in recent years.

"The proposed increases in rail freight rates can only result in still lowered prices for soybeans, and thus in lowered acreage and thus volume of rail movement. Or the alternative is a still greater shift to truck and barge transportation within the industry . . . The end result of the proposed rate increases must mean:

"1—Further depressed unit prices for soybeans, or

"2—Limitations on production and usage at lower levels than would otherwise prevail."

The National Soybean Processors Association, the American Feed Manufacturers Association, and many other organizations have filed statements opposing the proposed freight increases.

FATS AND OIL EXPORTS

U. S. Department of Agriculture finally announced the increased purchase authorizations for fats and oils to Spain and Italy Mar 26 and 27. They will increase takings by Italy of 22,000 tons of crude oil, either soybean or cottonseed, and by Spain of 17,000 tons, basis salad oil.

Earlier the Yugoslavia authorization was increased from \$2.5 million worth of cottonseed and soybean oil to \$4.3 million worth. Total for Yugoslavia now is 11,500 metric tons basis salad oil in drums. And purchase authorization for Turkey announced Mar. 13 will take 10,000 metric tons.

Bache & Co., Chicago broker, points out that **the recently made export allocations for soybean oil must be exercised before June 1** which should increase demand for the nearby product.

These purchase authorizations represent much of the remaining authorizations and funds. Congress is reasonably sure to approve another \$1 billion in P. L. 480 funds. For details see Washington Digest on page 48.

Trade News Service, New York, reminds us that the **visible commercial supply of soybean and cottonseed oils is down almost 6,000 tankcars**, as compared with last year at this time. The total disappearance of the two oils has been slightly ahead of last year,



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and the present rate of disappearance of cottonseed oil cannot be sustained.

News reports are that the proffered U. S. aid to Poland will total \$50 million instead of the \$200 to \$300 million asked. There have been reports that the Poles will turn down this smaller amount as not being worth the risks involved in antagonizing the Soviet government. If aid to Poland goes through, U. S. fats and oils will be among the chief commodities involved.

A total of 2.1 million bushels of soybeans was loading or scheduled to load out of the Port of New Orleans for export shipment in the Mar. 27-Apr. 17 period, as of the former date, according to W. L. Richeson & Sons, Inc., New Orleans freight brokers.

PROCESS OPERATIONS SLOWER

For the first time this year the rate of processing operations appears to be slowing down somewhat. Several Iowa plants were reported closed or to be considering closing in late March. Many of our reporters say **processors in their respective areas are operating 80% to 90% of capacity as compared to 100% earlier in the season.** Lack of supplies and the poorest conversion ratio so far this season, also the recent slow movement of oil, are given as reasons.

Country movement of soybeans is still generally very slow, although one major Illinois processor reported receipts increasing from 25,000 to 30,000 bushels daily to 100,000 bushels per day on the late March upturn in the market, which made it possible for farmers to receive \$2.30 for their beans.

ACREAGE OUTLOOK

A moderate decrease in 1957 soybean acreage in the Midsouth is seen by Dixon Jordan, Memphis broker. He says a decrease in acres in southeast Missouri will be offset by larger intentions in Arkansas and the overall decrease in the Midsouth will be about 1%-2%.

For USDA's planting intentions report see page 32.

Late March blizzards brought much needed moisture to the western soybean area. But though the surface soil most places is now well supplied with moisture, **subsoil is still short over wide areas.**

Walley Agricultural Service, Fort Wayne, Ind., observes: Moisture deficiency in the subsoil leaves the country very vulnerable to drought."

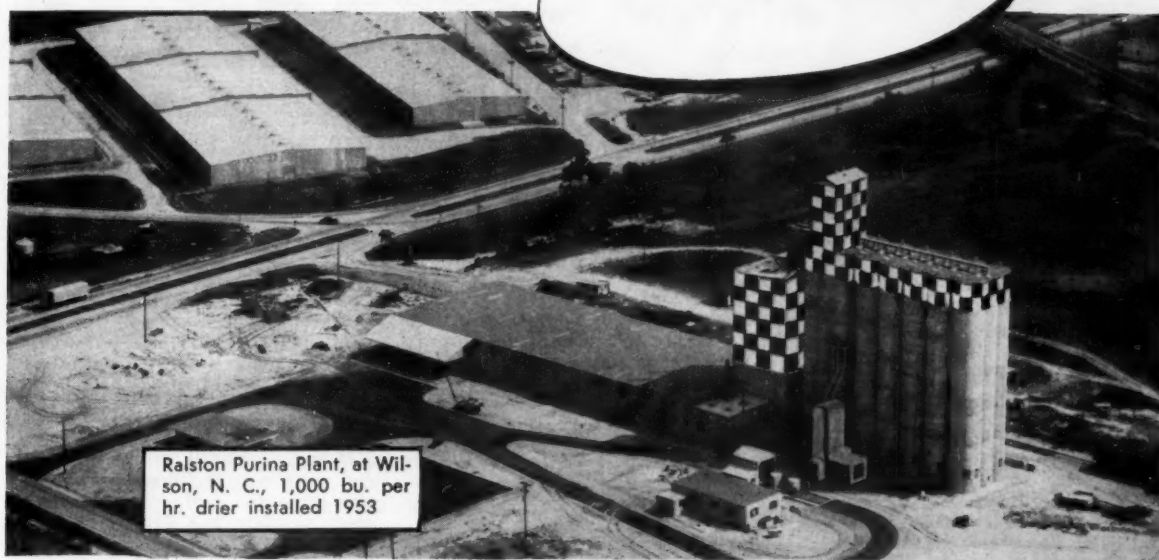
	Cash prices Mar. 29
Soybeans, No. 1 yellow, Chicago, bu.	\$ 2.44
Soybean oil meal, Decatur, ton	47.00
Soybean oil, crude, Decatur, lb. ....	.12 ³ / ₈

	Cash price to farmers for No. 1 soybeans Mar. 29	Cash price to farmers for No. 2 soybeans Mar. 29	Retail cash price for bagged soybean oil meal Mar. 29
Ga.	\$2.15		\$65
Ill.	2.25@2.30		64@70
Ind.	2.22		70
Iowa	2.23		62
Mo.	2.28		
N. Dak.	2.05	\$2.00	
Tenn.	2.25@ 2.30		65
Va.	2.25	2.25	

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AD 106

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13

Weed Problem

Delaying planting until soil and weather are warm to give soybeans a head start on the weeds is most important.

Repeated diskings before planting may not help except to firm seedbed. Chemicals work best in wet seasons when cultural methods may not be effective.

(STAFF WRITTEN)

FARMERS ARE MORE concerned with weeds in soybeans than in corn and some other crops. Fred W. Slife, assistant professor in crop production at the University of Illinois, says "this concern is justified because weeds are unsightly, cause harvesting losses, cause excessive wear of combine equipment, and may reduce yields by competition for plant nutrients."

Weeds have reduced yields as much as 17% and on the average 3 to 4 bushels in tests conducted by C. R. Weber and D. W. Staniforth at Iowa State College.

If weeds in your fields cause you to delay harvesting until frost kills them, you may have greater shattering losses than you would otherwise.

And if you still need convincing that it is important to control weeds in your soybeans, remember that weed seed and trash in harvested soybeans are objectionable in both the domestic and export markets. The day is about past when you can make a profit from selling weed seeds with your soybeans.

The first 2 to 3 weeks are the critical period when soybeans need help in their battle for survival against weeds.

Henry W. Indyk of the University of Delaware notes that soybeans are excellent competitors with weeds after they become well established and conditions are favorable for rapid soybean growth. But their competitive efficiency is low until they are able to form a dense ground cover between the rows.

Anything at all that will result in a vigorous growing crop will aid soybeans in their competition with weeds. This includes almost every step in production, although all are not directly associated with control of weeds.

Good rotations so soybeans won't

be grown on the same land every year, controlling weeds in preceding crops, with the use of chemicals where needed, maintaining the land in a good state of fertility and use of fertilizers where needed, the use of adapted varieties, inoculation and/or treatment of the seed, planting weed-free seed, planting in rows so the crop can be cultivated, and correct plant spacing in the row are all part of weed control.

Even though several herbicides are now available for use on soybeans, and they have been given at least qualified approval by experiment stations, cultural control in the main is still the most effective and economical method for keeping down weeds in soybeans. Chemicals show promise, especially in situations where the weed problem is severe.

The mechanical steps to take are few and simple. Recommendations have changed little in years. They are:

1—Delayed planting until soil is warm.

2—Disking or harrowing just before planting to kill all weeds that have emerged, also to prepare a firm seedbed. Soybeans require a firm seedbed so the drill doesn't put them too deep.

3—Use of the rotary hoe, harrow or weeder after emergence (once or twice). The best implement to use depends on soil type.

4—Use of the shovel cultivator as many times as needed.

But attacking the weeds at the right time is everything. If the practice were as simple as the rules there would be no weed problem!

Delayed Planting

Waiting until the weather and soil are warm before planting is perhaps most important of all steps in controlling weeds.

Says Oliver C. Lee, extension botanist at Purdue University: "There is very little we can say about me-

chanical control of weeds in soybeans, aside from suggesting that growers delay planting. This will give them an opportunity to prepare a good seedbed and destroy any weeds before the beans are planted."

R. G. Robinson and R. S. Dunham report that in Minnesota tests late planting was shown to give excellent weed control.

If you wait until the soil is warm and growing conditions are favorable soybeans will emerge quickly after planting and grow rapidly.

Most weed men recommend early preparation of the seedbed, then late planting on a firm seedbed so the beans come up quickly.

Says C. J. Willard, professor of agronomy at the University of Ohio: "Beans get ahead of the weeds if they germinate quickly. This ability of soys to outgrow weeds is the vital thing. Thick seeding is important in this connection. Beans planted thick will be 2 to 3 inches higher than thin-planted when the latter are 4 to 6 inches high.

"Year after year in my chemical control experimental plots, even though I sow German millet and rape as additional weeds, I have had late planted soys control these and all incidental weeds to the point of very little loss—often with no cultivation in solid drilled beans."

It has been quite standard to recommend harrowing or disking to kill one or more crops of weeds before planting. However, there may not be so much advantage for several diskings as had been thought. Quoting Willard: "My own feeling is that killing weeds before planting, except as an immediate prelude to planting, is unimportant. This reduces the weed seed population in the soil, but has little effect on the numbers of weeds this year. Each disking brings up plenty!"

And, Robinson and Dunham point out that under Minnesota conditions



—Soybean Digest photo
WEEDY conditions like this may result in discounts when soybeans are sold at the elevator. Volunteer corn and buttonweed are especially prominent.

working the soil before planting does not help weeds to germinate—in fact, it may have the opposite effect. **Purpose of the disking is to kill weeds that have already come up, not bring them up, and to firm the seedbed.**

Robinson and Dunham recommend late planting, but to confine disking or harrowing to planting time under Minnesota conditions.

Best early planting dates for soybeans vary of course with the season, and range from May 15 to May 25 in the North to late April in the South.

Of course there is such a thing as delaying planting too long, with resulting lower yields. The point is to wait until the soil is warm enough to support rapid germination.

Rotary Hoe

After the beans emerge use the rotary hoe or spiketooth harrow or both.

The rotary hoe should be operated lengthwise of the row, the harrow crosswise or diagonally across the row. The implements should be used when the bean plants are rather limp, usually in the heat of the day.

Slife says: "We strongly recommend the use of the rotary hoe as the first cultural operation, using it to break the crust as well as destroy the weed seeds that are in process of germinating."

But the rotary hoe is not effective under all conditions.

States Dunham: "We go along with other soybean states in recommending the harrow and rotary hoe. Our greatest objection to the rotary hoe is that timeliness of cultivation is very important and **often our soil is too wet or too dry to use the implement at the time the weeds are in the proper stage for uprooting.**"

Cultivator

Timely shovel cultivation, one to three times, is necessary to keep

down weeds. It is very important to destroy as many weeds as possible at the first cultivation by getting close to the rows.

Harvesting will be easier if care is taken not to ridge the rows.

Slife says the timing of the cultivations is not too important except that if you have a choice the soybeans should be cultivated after a rain rather than before it.

The foregoing recommendations are for soils and conditions where

the soil can be worked readily. Growing beans on some bottom lands and on heavy clay soils presents a different set of problems.

On soils that are in proper condition to work during only short periods, and soils that should be worked as little as possible, timing planting to give the beans every possible advantage over the weeds becomes vitally important. Chemicals may be of real value under such difficult conditions.

Growing Number of Herbicides for War on Weeds in Soybean Fields

SEVERAL chemicals are now on the market for the soybean producer to use in his never-ending battle against weeds. They have been experiment station tested and given qualified approval.

So far, soybean producers are not making wide usage of herbicides on soybeans. It is true that New Jersey producers used dinitro on perhaps 10,000 acres of soybeans in 1956, according to Donald A. Schallack of Rutgers University. Paul W. Santelmann at the University of Maryland says many producers in that state are also using dinitro and appear to be happy with it.

But in general producers and weed men consider chemicals to be in the trial stage, and perhaps as an auxiliary weapon to fall back on when tried and tested mechanical methods fail.

There are several reasons for this viewpoint:

1—Herbicides are still comparatively expensive, though application in 10- to 15-inch bands over the rows will materially reduce their cost.

2—Soybeans have little natural tolerance to most post-emergence herbicides tried so far and are easily

injured by them. For this reason, most chemicals are being used pre-emergence.

3—Success with herbicides has been spotted. There is still much to learn concerning their successful use.

Slife recommends complete field treatment with herbicides only after a producer has gained several years' experience in their application. Most weed men concur. Start out with weedicides in soybeans on a trial basis.

W. B. Albert, Clemson Agricultural College, Clemson, S. C., points out that cultural and chemical methods of their control are most effective under different situations: "Seasonal conditions are not always so that good weed control can be obtained by mechanical methods. With frequent rains tillage may not be possible but chemical weed control would be at its best.

"On the other hand, in seasons too dry for good chemical weed control, mechanical methods are at their best and can be used to supplement the chemicals, as necessary.

"At worst, chemical weed control might be considered a form of insurance against conditions preventing successful mechanical control.

Sprays are most effective when soil is moist enough to germinate the seed.

Under better conditions it could substitute for mechanical methods."

So it may be well worth your while to try one or more of the herbicides.

Sprays used pre-emergence are most effective when there is enough moisture to germinate the weed seeds. If the soil is too dry for 2 or 3 weeks after treatment, their effectiveness will be reduced.

In all cases manufacturers' recommendations should be followed carefully.

Pre-Emergence Chemicals

Following are some of the herbicides recommended for trial use for pre-emergence application and some of the experiment stations where they have been tried:

NP (Alanap-3)—Ill., Iowa, Ohio.

Generally good results in Ohio are reported by Willard. Controls both annual weeds and grasses with the exception of smartweed and morning glory.

Recommendations vary from 3 to 4 to 6 to 8 pounds of active ingredient in 20 gallons of water per acre. Should be sprayed at planting time or immediately after. Holds down weed growth for 6 to 8 weeks. The chemical is non-irritating and easy to handle.

CIPC—S. C., Ark., Ohio, Ill., Miss., Md., Ga., N. C.

W. B. Albert, Clemson Agricultural College, South Carolina, reports excellent control of crabgrass and various species of small-seeded broadleaved weeds for 3 weeks or longer. Does not control cocklebur, coffee-weed or ragweed.

Recommended rates of application vary from 5 to 8 pounds in 20 to 40 gallons of water per acre. Orvin E. Rud at North Carolina State College reports some crop injury when CIPC was applied at the 8-pound rate.

J. T. Holston, Jr., at the Mississippi Agricultural Experiment Station recommends a trial application of CIPC at planting time—1 to 1½ pounds per acre on a 12-inch band basis where crabgrass and *Brachiaria* species are troublesome.

Mississippi does not recommend CIPC for use on heavy clay soils.

Lodging of soybeans caused by CIPC was listed as a problem needing further study at the Southern Weed Conference this year.

DNBP, dinitro (Premege or Sinox PE)—Ohio, N.C., Ill., Iowa, Va., N. J., Md., Tenn.

Willard says dinitro has perhaps the best all around record but it is expensive and must be applied as near as possible to the time when the beans emerge in order to have enough of the herbicide present in the soil when the weeds come up to kill them. DNBP volatilizes readily in hot weather. For both annual grasses and broadleaved weeds.

Recommended rates of application vary from 3 to 5 pounds of active material per acre in New Jersey to 8 to 10 pounds in Iowa in 40 gallons of water. Schallock of New Jersey cautions producers to use only 3 pounds of material in very hot weather since the first leaves of the soybean are often seriously burned then.

In wide rows, treat only over row to cut costs.

Rud in North Carolina reports the dinitro has given fair weed control only when used at a 9-pound-per-acre rate. Dunham of Minnesota states control with dinitro applied pre-emergence has not been satisfactory even at the 9-pound rate.

CDA (Radox)—Ill., Ind., Ohio, Minn., Iowa, Md.

Good as a grass killer and soybeans are tolerant to it. Willard says Radox will also control many broadleaved weeds.

It will last 3 to 5 weeks after application.

Radox appears very promising for control of giant foxtail, a serious problem in Illinois, Indiana and other states, according to E. C. Spurrier at the University of Illinois.

Radox is most effective on loam or heavier soils. It has been less effective on light, sandy soil.

Radox can be irritating to the skin and eyes if not handled in accordance with directions.

To cut expense Radox can be effectively applied in a 10-inch band directly over the row at planting time, at a rate of 1 pound of active material in 5 gallons of water per acre if the crop is in 40-inch rows.

Post-Emergence Chemicals

There is less possibility of chemicals being used after soybeans emerge from the ground. However, the following are recommended:

2,4-D, amine salt—Ill., Va.

Should be used only on bottom

lands or other areas where infestations of ragweed, annual morning glories or cocklebur are especially severe. The treatment can be used to eliminate these weeds without reducing soybean yields, but extreme care and supervision are necessary to avoid injury to the beans.

Its use is recommended at ¼ to ½ pound per acre 1 to 2 weeks after the soybeans emerge. A quarter-pound is certain to injure the beans, so use the latter only when greater injury from the weeds is certain.

Herbicide oil—Miss., Ark.

A single directional spraying with a herbicide oil at 5 gallons per acre in bands when soybeans are from 1 to 14 days past emergence is recommended where no pre-emergence chemical is used and an annual weed problem exists. Under no conditions should this rate be exceeded.

This is a petroleum product offered by several oil companies. Esso 38, Cities Service No-Weed Oil No. 1, and Lion Herbicide Oil No. 1 have performed satisfactorily for several years in field tests.

Premege (DNBP) also shows promise for use after the soybeans have emerged and is under test at several experiment stations. If generally successful, it could mean a commercially feasible, low-cost weed control program for soybeans.

States R. E. Frans, assistant agronomist at the University of Arkansas: "We are very much interested in the relatively new method involving an early post-emergence treatment with DNBP. We are trying this method this year on conventional spaced beans and also on close spaced rows. This may possibly be the answer to weed control in soybeans in this part of the country. This method offers the advantage of being quite economical to use with a minimum amount of labor expended on the crop."

Experiment Station Recommendations For Special Situations

HERE ARE observations and recommendations on how to meet special weed control problems from a few of the state experiment stations:

Delaware
Henry W. Indyk, assistant professor of agronomy at the University of Delaware:

1—A sound weed control program in all crops appearing in the rotation.

2—Begin seedbed preparation early with several periodic diskings at 7-to-10-day intervals before planting.

3—Plant soybeans free of weed seeds.

4—Avoid planting too early when

growing conditions may be unfavorable for rapid emergence and growth of soybeans.

5—Use cultivating implements such as rotary hoe, spike-tooth harrow, or weeder before soybeans come up if germination and emergence of soybeans is delayed and weeds become a problem.

Do not use these implements when the soybeans are emerging from the soil.

Use again when soybean seedlings are 3 to 8 inches tall, preferably when the plants are wilted such as during the warm part of the day.

6—Use properly adjusted shovel cultivator for remainder of season.

Avoid injuring the soybeans by practicing shallow cultivation at a proper distance from the plant.

7—Avoid ridging as this makes for harder combining.

Georgia

S. V. Stacy and Ellis W. Hauser, agronomists, Georgia Experiment Station, Experiment, Ga., recommend the following cultural procedures:

1—Turn the soil and disk or otherwise fit the land properly so the seedbed will be in excellent condition for planting.

2—Plant at recommended dates. Earlier plantings usually give higher yields in Georgia.

3—Plant in such a way that a shallow furrow is left behind the planter.

4—For the first cultivation, use a rotary hoe in conjunction with sweeps. The rotary hoe is effective against small weed seedlings and the sweeps will move soil from the top of the furrow down into the furrow and cover the small weeds which have emerged there.

5—Cultivate one or two times with conventional sweeps.

6—Some herbicides are promising in preliminary tests but are not yet recommended for general use.

New Jersey

Donald A. Schallock, extension associate in weed control, College of Agriculture, New Brunswick, N. J.: Plant soybeans on land that has been in corn or clean tilled crop for 1 year or that has had a smother crop or grain crop. We discourage taking land out of sod and immediately putting it into soybeans because of the large amount of annual weeds that come up. The land is well fitted to insure rapid growth of soybeans and uniform coverage of chemical where chemical is used.

Soybeans are rather universally planted in rows and cultivated as a weed measure. This change has occurred within the last 6 years. I believe the yields are as high as the broadcast beans and the cost of seed is less. Even if we had successful weed control, I believe we would still plant our soybeans in rows.

South Carolina

W. B. Albert, department of botany and bacteriology, Clemson Agricultural College, Clemson, S. C.: Most soybeans in South Carolina are planted on fields that have matured a crop of oats. Planting of soybeans is usually between June 1 and June 15 and in some cases as late as July 1. Farmers plant their soybeans as soon after grain harvest as possible, with a minimum of time allowed for land preparation.

The shortness of the season precludes a really large crop and soybeans are not a major money crop. The farmer attempts to produce a second crop in a season on his land

at relatively low cost and with some profit and except in seasons of drouth is usually more or less successful.

In their attempts to gain time on planting dates, even some of our best farmers burn the straw and stubble after combining their grain. Experience has shown that more moisture is required for soybean germination if large quantities of straw and stubble are plowed and disked into the soil than if the soybeans are planted in bare soil. In addition, the incorporation of organic matter into the top soil tends to inhibit rapid development and growth of soybeans for several weeks. Although burning straw is generally deplored, the practice will doubtless persist until reasonably acceptable alternative methods are shown.

The soybeans are then planted without further preparation of land, and soil moisture conditions permitting germination and growth of seedling plants are rapid.

As soon as possible after germination, the crop is tilled as necessary with the conventional equipment. If seasonal conditions have not interfered, the crop can usually be maintained relatively weed free, although cocklebur and coffeeweed will usually be present in the rows.

Southern States

E. E. Hartwig, Delta Branch Experiment Station, Stoneville, Miss.: Plant soybeans during May in a clean, moist seedbed at the rate of one seed per inch in the row. Soybeans will emerge rapidly and grow rapidly, and under most conditions will have row middles nearly shaded by 7 weeks after planting.

Use rotary hoe while beans are

small. If rotary hoe is not used, cultivate close to the row.

Cultivate as needed to control weeds.

Wisconsin

Geo. M. Briggs, retired, and James H. Torrie, University of Wisconsin, Madison, Wis.: Frequent harrowings or light diskings at 6- to 8-day intervals before planting are important to destroy weed seedlings in the surface soil. In dry springs when surface weed seeds do not germinate readily, the use of a cultipacker or roller to firm the soil around these seeds may help to induce germination.

Most weeds can be controlled if the pre- and after-planting cultivations can be made. It is important to destroy as many weeds as possible at the first cultivation by getting close to the rows.

Some farmers use a disk type of shovel for the first cultivation. The front disk goes close to the row and throws the young weeds away, while the back disk throws fresh soil in its place.

Others use the $\frac{1}{2}$ duck-foot cultivator and go close to the row in order to cut off the weeds and throw them away from the row. Harvesting will be easier if care is taken not to ridge the row.

Still others use the regular shovel with a shield such as is used for small corn, throwing the dirt over the row and letting it sift through these shields and cover the small weeds.

Some farmers who have had difficulty controlling weeds before cultivation attach a small section of light drag behind the cultivator to drag directly over the rows and thus kill millions of small weeds.

Urges Elimination of Jimson Weed

SPECIAL PRECAUTIONS by producers to eliminate jimson weed infestations from their soybean fields will help to establish good relations with European buyers of U. S. soybeans, says Geo. A. Parks, director of the fats and oils division, Foreign Agricultural Service, U. S. Department of Agriculture.

While U. S. grading standards do not distinguish jimson (*Datura Stramonium*) from any other weed, Europeans regard it as poisonous and object to feeding soybean oil meal containing it to their livestock.

In ordinary concentrations jimson is not regarded as poisonous but there is always the danger of a pocket of the ground seed occurring in feed and killing cattle. At the present time tests are being conducted in England to determine whether there is any danger of toxicity to poultry, according to Guy Chipperfield, president of the International Association of Seed Crushers, London.

From time to time European buyers of U. S. soybeans have complained of contamination of the beans with jimson seeds, and these complaints were especially strong some years ago. Apparently such complaints have been increasing again of late. Recent arrivals of soybeans in the United Kingdom have shown jimson seed content ranging from .03% to as high as .24%. The permissible percentage is less than .1%, according to tests on animals.

It would be better for producers to eliminate this pest from their fields now rather than to be driven to it later by more serious complaints, or by further discrimination against U. S. soybeans by European buyers.

Jimson is easily spotted in soybean fields. At times it may be worthwhile to go through the field in late summer and pull it out by hand. It is not a hard weed to eradicate if growers will take the time to do so.



Figure 1. Double disk opener used for planting soybeans on heavy clay soils.

PROFITABLE yields of soybeans usually cannot be obtained with incomplete stands. With incomplete stands weed problems are increased. The heavy clay soils of the Delta section of Mississippi are problem soils from the standpoint of getting consistently good uniform stands. These soils are usually either too wet or too dry to work well.

A common practice on the heavy clay soils is to disk prior to planting to destroy winter weed growth. Under most conditions, the soil dries to the depth of disking. Seed is distributed among the dry clods, and in many cases a rain of at least an inch is needed before seed will germinate. A rain of one-fourth to one-half inch may sprout the seed, but will not be adequate for obtaining a stand. Seed lying in dry ground for 10 to 20 days will lose seedling vigor. Consequently, replanting will be necessary.

In many cases growers plant in early April because of the feeling that rains heavy enough for germination are more likely to occur. All time of planting studies conducted at Stoneville have shown clear-cut advantages for delaying planting until in May.

During the past 3 years perfect stands have been obtained within a week after planting from plantings made during May and June on Sharkey Clay soils without having any rain after planting. Good stands

Planting Methods for Heavy Clay Soils

Double disk opener helps obtain good stands

By EDGAR E. HARTWIG AND O. B. WOOTEN*

result from shallow seedbed preparation followed by using a planter equipped with double disk openers rather than the conventional sword openers.

Seedbed preparation begins by fall plowing with a moldboard or disk plow. As soon as it is possible to get on the ground in late February or March, the ground is worked with a spring tooth harrow to destroy winter weed growth. The ground is spring toothed at regular intervals of 2 to 4 weeks to keep the surface free from weeds. For the last spring toothed prior to planting the spring tooth should be run as shallow as possible to destroy weeds, which need not be over 1 inch deep.

The spring tooth harrow is preferred to a disk harrow because it does not leave the ground in as cloddy a condition. Weeds can be destroyed by shallower setting than is needed for a disk, and consequently, less moisture is lost. Depth of penetration of the spring tooth harrow can be easily adjusted to maintain a shallow working level.

Some growers have disked their ground early in the season and then followed with a heavy spike tooth harrow at regular intervals to destroy weed seedlings. It is considered less objectionable to permit a few small growing winter annual weeds to survive than to work the ground deeply and lose a greater amount of moisture.

The double disk opener permits placing the seed in a narrow opening in moist soil (Fig. 2). Where the spring tooth is run 1 inch deep, the planter is set to place the seed approximately 2 inches deep. Seed is pressed tightly against moist soil

below and on both sides of the seed. The disk openers will work very well in soil too wet for a sword opener. Disks should be equipped with scrapers.

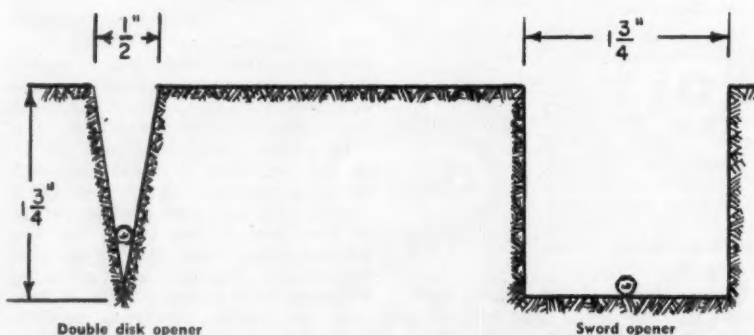
The standard sword opener leaves a trench approximately $1\frac{3}{4}$ inches wide. Even with deep planting, the seed falls loosely into this wide furrow and is covered by dry surface soil. A complete stand is never obtained without a rain. The sticky, plastic condition of the soil has made the use of seed press wheels more or less unsatisfactory.

Double disk openers are now available as units to be interchanged with the standard sword openers for some makes of planters. Machinery manufacturers have produced a more ruggedly constructed unit to fulfill the needs for the area.

With the double disk opener, it is also possible to plant soybeans after winter oats or wheat on the heavy clay soils and obtain a stand without preparing a seedbed. If the ground is disked to prepare a seedbed, a rain of 2 to 3 inches is needed before a stand can be expected.

To date, best results have been obtained by burning the grain straw and planting immediately. Additional research is in progress on methods of handling beans after grain without burning. No difficulty has been encountered in planting or obtaining a stand when straw has not been burned, but the problems arise in cultivation for weed control.

* Research Agronomist and Research Agricultural Engineer, Agricultural Research Service, U. S. Department of Agriculture, in cooperation with the Delta Branch of the Mississippi Agricultural Experiment Station, Stoneville, Miss.



Double disk opener

Sword opener

Figure 2. A diagrammatic comparison of seed furrows after double disk opener and standard sword opener.

Avoids dockage 4 ways . . . puts

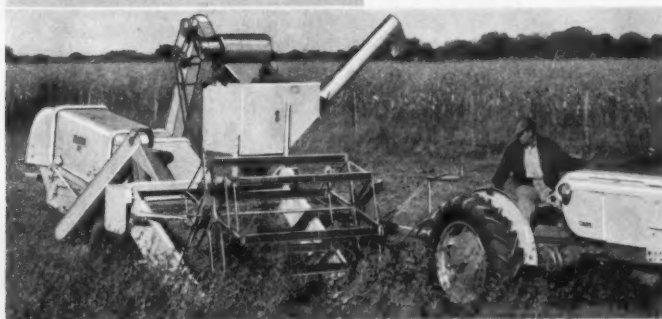
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SOYBEAN EXPERT Howard L. Roach, Plainfield, Iowa, president of the Soybean Council of America, explains to Italian farmers at Verona Fair the importance of soybean oil meal in poultry feeding.



ITALIAN FARMER studies sacks of feed concentrates available from the United States at International Agricultural Trade Fair in Verona.

Big Attendance at Verona

Report by the president of the Soybean Council of America. Mr. Roach has been in Europe on market development projects.

By HOWARD L. ROACH

President, Soybean Council of America, Inc.

Special to the Soybean Digest from Verona

FARMERS FROM Italy, Jugoslavia, France, Austria as well as farmers from many other nations crowded the grounds of the International Fair at Verona, Italy, the second week of March to break all attendance records which have stood for over half a century.

The first 3 days of this fair saw spirited competition in the various classes of the horse show. Horses, still providing most of the farm power in this rich Po valley of northern Italy, had only to look across the fence, however, to see their finish. There, in the greatest tractor show of Europe, were exhibited over 60 different makes of farm tractors with several models of each make on display.

Mechanization is coming to European agriculture as it has arrived in America. Everything from small garden tractors to giant track-type machines were on display. Diesel motors power most of the units in this country where gasoline is 85¢ per gallon.

Germany, France, Switzerland, Holland and other nations had exhibits showing products and produce from their nations but the outstanding exhibit was the one presented by the United States. This exhibit occupied an entire building and showed the progress made in the poultry industry during the past few years in quick growth and feed utilization.

The exhibit was both educational and interesting. The opening day over 40,000 persons passed through the doors.

Murals decorating the inside of the building were large photographs showing American farms, soybean fields, grain elevators, soybean processing plants, and feed manufacturing plants.

Near the office were visible incubators, placed at various heights to accommodate adults and children, in which chicks were constantly emerging from the shell. One middle-aged Italian was heard to say, "I knew something like that happened but it always happened under the hen and I couldn't see just what did take place."

Eggs had been pre-set so that each day of the fair this emergence of the chicks from the eggs could be witnessed by the crowds. Nearby were pens of day-old chicks, a pen of broilers, hens in batteries laying eggs, pens of turkeys and at the exit were two freezer counters filled with frozen poultry and poultry products even to the American TV dinner. On top of the counters were displays of American canned poultry while behind on shelves were infrared broilers with 2- and 3-pound broilers turning on their spits.

Central in the display were samples of feed ingredients with emphasis on 50% soybean oil meal as the protein base for a successful poultry operation. A revolving display of feed grains used by American feed manufacturers along with soybean oil meal attracted the attention of the visitors.

Many of the visitors had questions which were answered by Kenneth K. Krogh, Foreign Agricultural Service in charge of Trade Fairs; Chas. J. Witt, Foreign Agricultural Service in charge of field operations of Trade Fairs; A. W. Brant, USDA, Beltsville, Md., poultry specialist; James W. Hayward, nutritionist representing the Soybean Council of America; and Howard L. Roach, president of the Council.

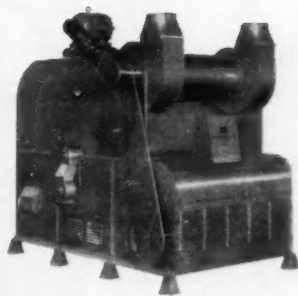
This group of Americans was busy from 9 in the morning till closing time at 7 in the evening answering questions and extolling 50% soybean meal as the basis for successful feeding of poultry, hogs and cattle. Many friendships were formed that should prove advantageous to American agriculture.

Fairs such as this one at Verona, Italy, are made possible by the foreign currency generated through the sale of surplus commodities through P.L. 480. Anyone visiting the Verona Agricultural Fair could not help but feel that a good job of advertising was being done for American agriculture, but that a tremendous job of selling international good will was being accomplished as well.



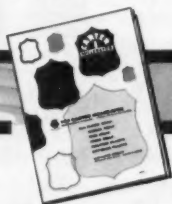
DR. J. W. HAYWARD (right), director of nutritional research, Archer-Daniels-Midland Co., answers questions of an Italian poultryman at Verona Fair. Dr. Hayward was a staff consultant attached to the U. S. livestock feed exhibit. The lady is an interpreter.

Make sure you know all the facts about the Carter Millerator!



FOR COMPLETE FACTS SEND FOR THIS FOLDER

To make sure you fully understand the versatility of the Carter Millerator, send for this illustrated folder giving complete information.



The Carter Millerator was designed for use at the head of grain processing plant cleaning streams. Here the Millerator removes secondary roughage, sand, and other fine materials commonly found in combine-harvested grains.

In recent years, various features have been added to Millerators to simplify their operation and installation, and to broaden their uses and applications.

Today, you'll find Millerators effectively used as *final cleaning* units on grain streams such as wheat and corn, for removal of insect and rodent residue. Another important use is their application to the de-hulling process on soybeans.

In combining aspiration and sieving, Millerators offer real cleaning efficiency and economy in flour mills, cereal mills, corn mills, rice mills, malting plants, and soybean plants.

689

Gentlemen: Please send me your folder on the Carter Millerator.

NAME _____

COMPANY _____

ADDRESS _____

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HART-CARTER CO.

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OIL TRANSPORT. The above 5,000-gallon-capacity tractor and tank trailer was recently added to the Dannen Mills truck fleet at St. Joseph, Mo. It will be used to haul Dannen soybean oil to refineries in Dallas, Houston, New Orleans and St. Louis. Photo was taken near the truck loading dock.

French Oil Production

FRANCE'S DOMESTIC production of oilseeds provides only about 15% of the country's total consumption of oil meal and cake, most of which is obtained from imported oilseeds, according to U. S. Department of Agriculture's Foreign Crops and Markets.

The total available oilcake in France in 1955 was 552,000 short tons. (The year 1955 rather than 1956 is used because more complete data are available for 1955; moreover, 1956 was highly abnormal in crop production and foreign trade.) Of this, 81,560 tons were net imports as oilcake and the balance was produced in France mostly from imported seeds. Total consumption of oil meal and cake in 1955 was only 72% as large as before the war.

Oil meal and cake: Production, exports, imports and total availabilities in France, annual 1938, 1946, and 1955 (short tons)

Kind	1938	1946	1955
Peanut	477,606	82,218	171,838
Soybean	13,182	342	74,218
Flaxseed ¹	156,790	9,529	72,575
Sesame	325	305	552
Copra	58,261	11,816	30,363
Palm kernel	53,372	33,332	69,975
Colza ¹	10,049	31,138	35,345
Sunflower	1,587	2,328	220
Cottonseed	1	0	0
Kardeseed	2	2	2,425
Others ¹	7,945	8,929	13,167
Total production	779,127	180,000	470,660
Imports	72,462	150,760	204,640
Exports	85,994	0	123,081
Net trade	-13,568	+150,760	+81,559
Total availabilities	765,559	330,760	552,219

¹ Includes oilcake produced from domestic oilseeds. ² Probably included in "Others." Source: Federation Nationale de l'Industrie des Corps Gras.

Most of the 923,000 tons of oilseeds imported in 1955 were peanuts, soybeans, flaxseed and palm kernels. The major domestic contribution was from flaxseed and rapeseed but these together yielded only about 84,000 tons of cake.

Fats Committee Meets

A COMMITTEE on fats and oils, appointed by the Advisory Council on Federal Reports, held its first meeting Mar. 5 in Washington, D. C.

The committee's membership consists of representatives of firms handling animal and vegetable fats and oils. It includes representatives of renderers, crushers of oil bearing materials and processors of fats and oils.

At its first meeting, the committee devoted its principal attention to statistical programs of the Bureau of the Census relating to fats and oils. Other subjects discussed were the classification of fats and oils establishments in Bureau of Census manuals.

The committee's future plans include recommendations to effect economies for industry and government and to prepare more useful, timely and accurate federal statistics.

Members of the committee are: Charles J. Orr, Anderson, Clayton & Co., Inc., Houston, Tex., chairman; C. J. Kennedy, Armour & Co., Chicago, Ill., vice chairman; E. W. Brockenbrough, Institute of Shortening and Edible Oils, Inc., Washington, D. C., secretary; Thomas A. Barber, J. Howard Smith, Inc., Port Monmouth, N. J.; R. J. Fleming, National By-Products Inc., Des Moines, Iowa; Harold V. Knight, Lever Bros. Co., New York, N. Y.; J. W. Moore, A. E. Staley Manufacturing Co., De-

catur, Ill.; T. J. Totushek, Cargill, Inc., Minneapolis, Minn.; Boardman Veazie, Swift & Co., Chicago, Ill.; Donald B. Walker, Ralston Purina Co., St. Louis, Mo.; Willard E. Welsh, Shedd-Bartush Foods, Inc., Detroit, Mich.; and L. M. Wood, Procter & Gamble Co., Cincinnati, Ohio.

Nematode in Arkansas

THE ARKANSAS State Plant Board and the U. S. Department of Agriculture announce that the soybean cyst nematode has been found in one county in northeast Arkansas.

Arkansas thus becomes the fourth state in which this parasite of soybeans and other plants has been discovered since its first appearance in the United States 2½ years ago. Two counties in North Carolina and one each in Tennessee and Missouri are also known to be infested.

Identification of the soybean cyst nematode in Arkansas was made Feb. 19 in soil samples collected in Mississippi County in the northeast corner of the state. This finding of the pest was a result of the comprehensive nematode survey now getting under way throughout the Mississippi River Valley. The survey was begun after discovery of the nematode late last year in Lake County, Tenn., and in Pemiscot County, Mo., just across the Mississippi River.

As weather conditions permit, the cooperative state-federal search for the nematode will be extended in principal soybean-producing states to determine the pest's distribution.

Swift Promotions



Tom J. Nolan



Carl J. Ander

Three personnel promotions have been announced by C. T. Prindeville, vice president in charge of oil mills for Swift & Co., Chicago.

Carl J. Ander, formerly meal sales manager at the Des Moines, Iowa, mill has been advanced to meal sales manager at Champaign, Ill. Mr. Ander is a 10-year veteran with the company.

Tom J. Nolan has been appointed meal sales manager for the Des Moines plant. Mr. Nolan joined Swift & Co. in April 1950 as a sales representative for the plant food division in the Kansas City area. He was later transferred to the feed department and for the past few years has

been a field representative in Missouri.

R. M. Howe has been appointed assistant sales manager at the Champaign, Ill., plant. He joined Swift & Co. in March 1955 at the Frankfort, Ind., plant where he followed transportation and assisted in sales.

Oil Chemists Meeting

THREE SYMPOSIA will highlight the 48th annual meeting of the American Oil Chemists' Society at the Roosevelt Hotel in New Orleans Apr. 28-May 1. There will be a symposium on safety arranged by Dr. A. E. MacGee of the Skelly Oil Co. to provide coverage of safety problems in the laboratory, pilot plant and production plant; one on fats in nutrition and health; and one on unit processes and operations featuring papers on distillation of tall oil and on the processing of vegetable oils and oilseeds.

Notable papers to be presented at the general sessions will include one by Dr. Leonard Smith, director of utilization research of the National Cotton Council on "Cottonseed Oil and Competing Vegetable Oils"; and one by Dr. M. M. Renfrew, director of research and development, Spencer Kellogg & Sons, Inc., on "Drying Oils."

Central Soya Co. Advisory Board



ADVISORY BOARD of directors of Central Soya Co. concluded its third term in a meeting as guests of the board of directors at a recent dinner, when this photo was taken. Board Chairman Harold W. McMillen said the advisory group was created to provide opportunities for various management echelons to express their thoughts and transmit their ideas to the board of directors.

Standing, l to r: Roy Hall (Hall, Penny & Jackson, Chicago), C. I. Finlayson, W. E. Hugel, M. D. Kern, F. K. Dalrymple, E. P. Kovats, N. H. Witte, C. W. Crowe, R. B. Parrott and H. W. McMillen.

Seated, l to r: W. E. Mann, B. A. Townsend, N. F. Kruse, R. N. Allen, J. L. Andreas (president of the ad-

visory group), P. E. Hensel, E. G. Rose, and E. O. Hugel.

Five new members named to the advisory board effective Mar. 1 are: Tom Allwein, Decatur, plant manager; Robert B. Parrott, vice president, grain merchandising; E. E. Reynolds, manager, marketing division; Royle Sprunger, assistant general traffic manager; and Howard Watters, personnel and industrial relations assistant.

Members who retired from the board effective Feb. 28 were Finlayson, Hensel, J. L. Krider, and Kruse.

The board named Townsend as chairman and Royle Sprunger as secretary. Allen, Rose and Andreas were named to the board's steering committee.

Prater Rotary AIRLOCK FEEDERS

Increase the efficiency of your dust control or pneumatic conveying system by sealing off the collector against air leakage; whether operating under suction or pressure.

Prater airlocks are available in 4 sizes—3 styles—and with a wide variety of rotor combinations to meet your most exacting needs.

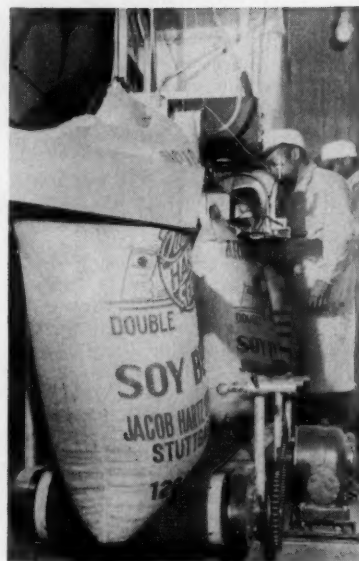
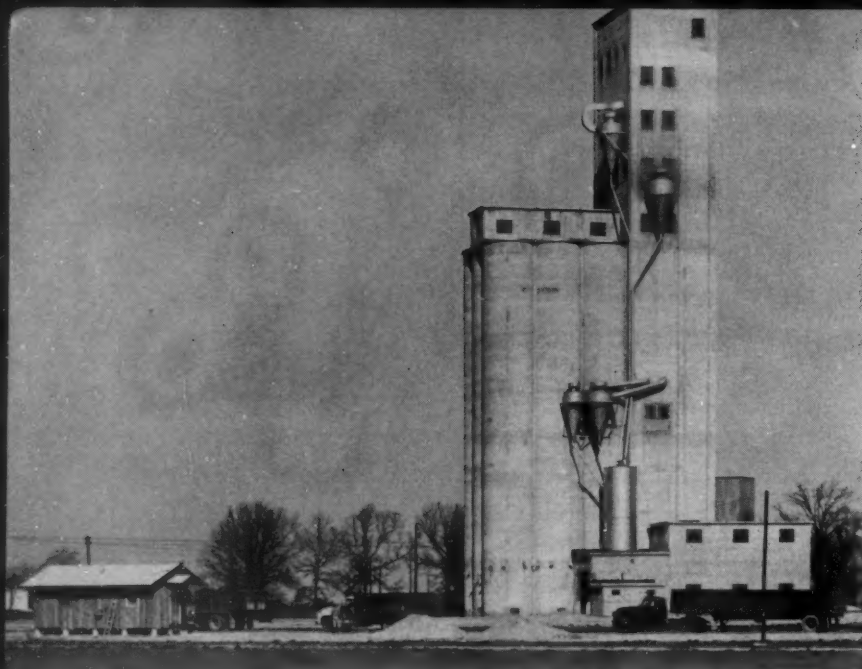
You'll marvel at the simple straight-forward design and rugged, dependable construction embodied in every Prater machine.

WRITE TODAY FOR FULLY ILLUSTRATED CATALOG.



PRATER . . . Foremost Builder of Rotary Airlocks

PRATER PULVERIZER COMPANY 1527 S. 55th COURT • CHICAGO 50, ILL.



NEW PLANT of Jacob Hartz Seed Co., Inc. John Bishop Construction Co. was the general contractor. Horner & Wyatt were the architects and engineers.

SACKING ROOM, showing Hytrol conveyor of Seedburo Equipment Co. and Union Special sewing machine.

Structure Cost \$350,000

HARTZ CO. BUILDS MODERN, NEW PLANT

CONVEYOR belt tripper furnished by J. B. Ehrsam & Sons Manufacturing Co.

Congratulations And Best Wishes To **JACOB HARTZ SEED COMPANY, INC.**

STUTT GART, ARKANSAS

We are pleased to have had the opportunity of furnishing the Elevator Cups, Bolts and Washers for installation in the Jacob Hartz Seed Company.

K. I. WILLIS CORPORATION
MOLINE, ILLINOIS

THE JACOB HARTZ Seed Co. has just completed at Stuttgart, Ark., one of the most modern seed and grain processing plants in the South.

The plant, a new steel reinforced slip form concrete structure of 200,000-bushels capacity, is the result of several years of planning by the Hartz Co. It is located on the north-east edge of the city on a 10-acre tract of land, and serviced by the Rock Island and Cotton Belt railroads. The plant is also accessible to all highways leading to the city.

The 190-foot-high structure embodies the latest engineering designs in plants of this type and has the most modern handling and processing equipment available. The firm spent over \$350,000 on the new addition to better facilitate seed operations in the area, and to maintain a high quality product for its south-wide customers.

Every operation in the new plant has been designed to permit maximum production at a minimum cost on a volume scale and still not sacrifice any of the important processing technique that has been the basis of

the success of this family-operated concern throughout the last 30 years.

The plant can be operated by a minimum labor and supervision force. With high-speed elevating and transferring equipment, up to 1 million bushels of storage can be added in the future and still be adequately serviced.

What is now known as the Jacob Hartz Seed Co., Inc., started as the seed department of the Hartz-Thorell Supply Co., an International Harvester Co. farm equipment agency organized by Jacob Hartz, Sr., and A. R. Thorell in 1925. The interest in seed was started through the introduction by this company of soybeans into Arkansas in 1926. The firm also did early work on seed oats in the 30's and on lespedeza in the early 40's.

In 1942, the Hartz-Thorell partnership was dissolved and the Jacob Hartz Seed Co. was organized as a partnership of Jacob Hartz, Sr., B. J. Hartz and Jake Hartz, Jr.

Marion Hartz joined the partnership in 1946. The business was converted into a corporation in 1948 with the above-mentioned men as stockholders. Alfred Hartz became a stockholder in 1957.

The original processing plant was built on the company's present location on East Cleveland Street in 1936.

Jacob Hartz, Sr., although not actively engaged in the business today, has been known as an aggressive business and civic leader in his community for many years. He was one of the original organizers and officers of the Arkansas State Plant Board, a past director and officer of the Arkansas Seed Dealers' Association and the American Soybean Association. He was chiefly responsible for the introduction of soybeans to Arkansas and the central South.

B. J. Hartz is now largely incapacitated due to poor health, but for years he did the analytical work and operated the elevator. He retains his position as an officer in the company and operates in an advisory capacity.

Jake Hartz, Jr., the general manager of the company, is a member of the Arkansas State Plant Board, past president and director of the Arkansas Seed Dealers' Association, past president and present director of the American Soybean Association, and director of the Soybean Council of America, Inc.

Marion Hartz is past president and director of the Arkansas Seed Dealers' Association, past president and present director of the Southern Seedsmen's Association. He assists Jake Hartz, Jr., in the management of the company, and handles public relations and sales work.

Alfred Hartz spent 1 year working



PLANT SUPERINTENDENT James Belford and A. T. Ferrell & Co. 248D scalper.

as an assistant to the U. S. Department of Agriculture plant breeder at the Rice Branch Experiment Station at Stuttgart. Since going to work for the company in 1948, he has been engaged in buying and retail selling, with emphasis on allied lines such as weed killers, pest controls and fertilizers. He is in charge of the firm's printing department.

We Are Proud

To have played a part in the new Jacob Hartz Seed Company Plant, and extend our congratulations to this fine Stuttgart firm.

We furnish free layouts and estimates on Metal Fabricated Grain and Seed storage or processing plants.

For quality steel fabricating work contact

STUTTGART MACHINE WORKS FABRICATING PLANT

Harry S. Ragland, Jr., Mgr. Stuttgart, Ark. Ph. WAbash 2-5042

Parks Says Oil Exports May Be at Peak

CURRENT LEVEL of U. S. exports of oilseeds and their products may prove to be at a temporary peak, although the long-term outlook for exports of these products appears good, George A. Parks, Jr., director of the fats and oils division of the Foreign Agricultural Service, U. S. Department of Agriculture, told the cooperative cottonseed and soybean oil mills conference at Fresno, Calif., Mar. 5.

"During the 1955-56 crop season a sizable portion of our edible oil exports were the result of adverse weather conditions in countries which either do not import significant quantities of oils or do not normally import them from the United States," said Parks.

He mentioned the short olive crops in such countries as Spain, Greece and Italy as being partially responsible for the good recent market for U. S. soybean oil in those countries.

"Reduced exports from India and China have been important factors in expanded U. S. exports of soybeans, as well as edible oils and proteins," said Parks. "Protein ex-

ports from the United States have been trending upward in recent years and, along with oils and soybeans, set a record last season. Exports of protein this season are currently running at a rate substantially below last.

"In recent years such countries as India and Argentina have adopted the policy of processing oilseeds and exporting only the products. As a result, European imports of oilseeds from sources other than the United States have been declining. Our own exports of soybeans in the meantime have been trending upward and a further expansion of this trend is expected.

"While total European oilseed crushings are down from prewar, our own crushing industry has expanded tremendously. Not only are we crushing at least as much if not more cottonseed, flaxseed and copra than prewar, but crushings of soybeans are nearly 10 times as great. About 60% of our present crushing consists of soybeans.

"Currently, the total quantity of oilseeds being crushed amounts to about 16 million tons or nearly two

and one-half times as much as in 1935-39."

Parks called the sale of agricultural surpluses for foreign currencies under P. L. 480 "a temporary program."

"By exporting cottonseed and soybean oils under Title I, P. L. 480, we are helping to build future cash markets for these products. However, efforts to 'build in' Title I as a permanent part of our agricultural export program should be avoided.

"We have some very good examples of what can be done in exporting commodities which are competitive in price and how little can be done in exporting commodities which are not. Soybeans, which are not available for financing under P. L. 480, are going out in record quantities.

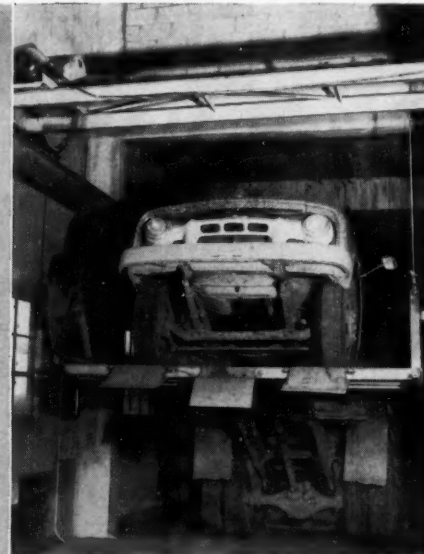
"On the other hand, this season our exports of flaxseed and linseed oil have been almost negligible even though linseed oil has been offered freely under P. L. 480. Our prices are above world market levels and until they again become competitive there seems to be no early possibility of significant exports. As a result, Commodity Credit Corp. is expected to take over most all of this year's flaxseed crop above the amount needed at home."



24" Belt Conveyor and Tripper



16" Belt Manlift



7 1/2 HP Truck Lift

ONLY "plant of its type" CHOOSES EHRSAM

The new modern, all-steel processing plant of the Jacob Hartz Seed Company, Stuttgart, Arkansas has EHRSAM EQUIPMENT installed to increase efficiency and production.

Get the most efficiency and productivity for your equipment dollar. WRITE/WIRE/PHONE

EHRSAM

THE J. B. EHRSAM & SONS MFG. CO.

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SALES OFFICES: Denver, Colo.; Fort Worth, Tex.; Kansas City, Kan.
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Congratulations

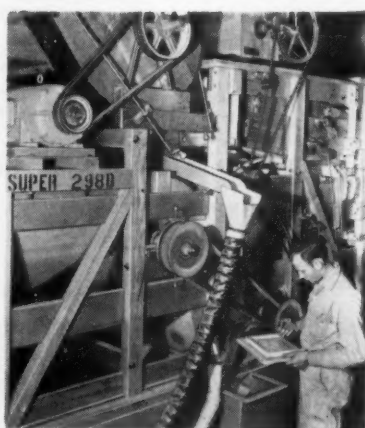
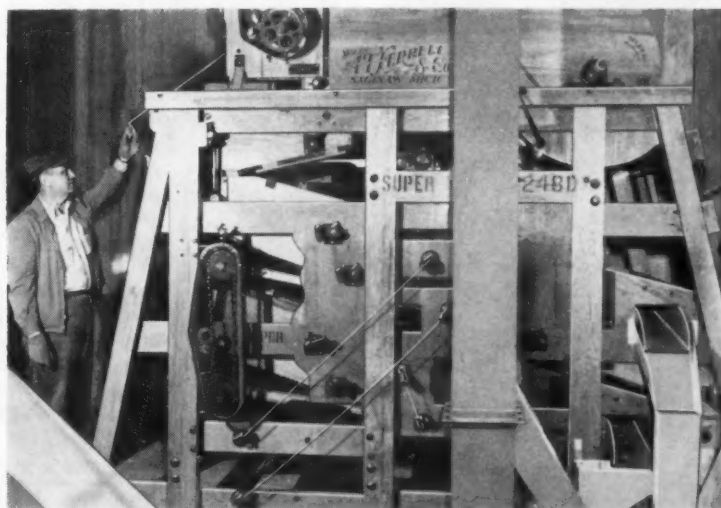
JACOB HARTZ SEED CO.

on the Grand Opening of your new Ultra-Modern Seed Plant— *the plant that quality built.*

Over a period of many years, your concern has continually shown utmost confidence in our products indicated by your purchases. The expressions of your executive and supervisory personnel likewise exemplify our line—

Plant Superintendent, James N. Belford, shown with the big new Clipper Super 2248-D remarks:

"On the recommendations of many large elevator operators we installed the 2248-D high capacity market cleaner in our new seed and grain processing plant. We have found this big Clipper very satisfactory in scalping soybeans and oats for grain shipment. As a preliminary cleaner it also enables us to increase the capacity of our Super 298-D precision Clipper without sacrificing quality."



Marion Hartz, Vice-President and Manager of the Seed Division has this to say about the Super 298-D (Shown being run by Chester Bloom) and other processing machines:

"No seed plant would be complete without Ferrell's time-tested Clipper cleaners. The precision 298-D cleaner and the 2248-D high capacity machine in our new plant were purchased on the strength of past quality performance of our 29D's, HSC2, Dodder Mills, and other Clippers. Over a period of nearly 30 years they have done a prime job for us on soybeans, oats, Kobe lespedeza and seed rice. We have come to think of Clipper as synonymous with Hartz quality seed—IN THE PLANT THAT QUALITY BUILT."

The Clipper line includes over sixty models of seed and grain cleaners, dodder mills, deboarders, huller-scarifiers, bucket elevators, continuous-cup and vibrating conveyors, the famous Randolph Grain Drier and other processing and handling products.

A. T. FERRELL & COMPANY

SAGINAW, MICHIGAN



SOYBEAN GROWERS!

YOU CAN GAIN UP TO \$870 **ALANAP-3** WEED KILLER AND

**Annual Weeds Can Rob up to 10 Bushels
Yield —\$22.50 per acre!***

Do you want to control weeds in soybeans with fewer cultivations with a non-irritating pre-emergence weed-killer? Then use Alanap-3 to gain up to \$21.75 per acre at a cost of only \$4.20 per acre based on a 14" band.

You also get these Added Bonus Benefits:

- (1)—Faster combining, less combine wear,
- (2)—No dockage,
- (3)—Fits weed control program,
- (4)—Weedy fields now become usable,
- (5)—Earlier harvesting, earlier grain planting.

Calculated on a 40-acre field Alanap-3 can give you these gains:

Increased Yield	Cost Alanap-3	Gain
\$870	\$168	\$702

At the same time, order your soybeans treated with Spergon — the best protectant against "damping off" and other fungous diseases so rampant in cold, wet planting weather. Or order your Spergon early and treat the seed yourself.

Here are the economics of Spergon-treating enough seed to plant a 40-acre soybean field:

*Agronomy Journal, Oct. 1956, article entitled "Effects of Annual Weeds on the Growth and Yield of Soybeans". †"Current Price Average"



EVERY 40 ACRES WITH SPERGON[®] SEED PROTECTANT

You can get a minimum gain of 2 bushels per acre increased yield from Spergon-treated seed. Many growers report increases up to 6 bushels per acre. Assuming only a 2-bushel increase worth \$2.25† a bushel (or \$4.50 gain per acre) with a cost for Spergon of only 30 cents per acre providing a net gain of \$4.20 per acre.

Calculated on a 40-acre field, Spergon can give you the following gains:

Increased Yield	Cost Spergon	Gain
\$180	\$12	\$168

Now look at your total possible gain from use of Spergon-treating and Alanap-3 weed control:

Gains 40-acre field

Alanap-3	Increased yield	\$870	Cost of Alanap-3	\$168	Gain	\$702
Spergon	"	" 180	" " Spergon	12	"	168
	Yields	\$1050	Cost	\$180	"	\$870

Total possible combined gain—\$870 per 40 acres or \$21.75 per acre. Order your Alanap-3 and Spergon early. Send for your free copies of booklets giving full information on use. OR visit your nearest dealer.



United States Rubber

Naugatuck Chemical Division

Naugatuck, Connecticut

producers of seed protectants, fungicides, miticides, insecticides, growth retardants, herbicides: Spergon, Phygon, Aramite, Synklor, MH, Alanap, Duraset.

4135 S. Pulaski Road, Chicago 32, Ill.

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MOST of Honeymead Products Co.'s business is transacted over telephones. Lowell Andreas, the president, wears a headset to free his hands. Just to the right behind him is James Maslon, vice president of production. In charge of specialty sales is W. B. Cox, vice president, who is seated behind Mr. Maslon. Looking toward the camera is Thayer Mullan, who handles soybean sales.

Honeymead Expands Further

To Add Deodorization System to World's Largest Solvent Plant

IN THE 1930's Honeymead Products Co. of Cedar Rapids, Iowa, was in the livestock feed business. It was faced with the problem of maintaining a continuous flow and economical supply of soybean meal. In order to do this, it built its first oil extraction plant.

Unlike the typical plant of that day, which used comparatively inefficient expellers, Honeymead installed a solvent extraction plant. By providing its own soybean oil meal for use in feed mixtures and by marketing the oil, the company was able to place itself in a more competitive position in the feed business. Honeymead subsequently proceeded to build other solvent plants in Washington, Iowa and Spencer, Iowa.

When World War II broke out, the Honeymead plants were sold. Honeymead remained a liquid corporation throughout the war years, but as the principals returned from service, like many another temporarily interrupted business man, they turned to the task of picking up the pieces.

In 1948 Honeymead management bought a crushing plant at Mankato, Minn. The plant had two expellers and the firm promptly added three more.

The crushing operation as such was actually a different business from what Honeymead had been in before the war. As soybean crushers, they became suppliers of both vegetable oil and a major feed ingredient—soybean meal.

Had to Expand

Honeymead knew that it must expand and modernize if it were to establish itself in a leading position in the crushing business. It added a 150-ton-per-day solvent extraction plant, and very shortly thereafter, junked most of the equipment purchased only a few years before.

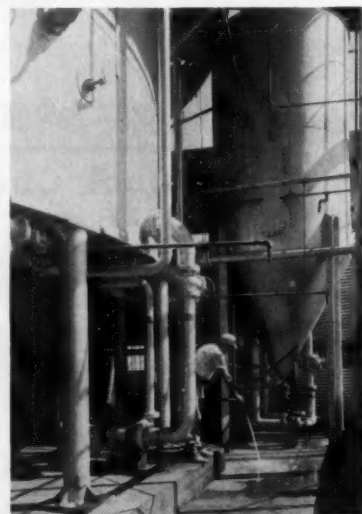
In 1953 Honeymead moved toward a leading position in the soybean world when it awarded a contract to the Blaw-Knox Co. of Pittsburgh for design, engineering, and construction of what was at that time the world's largest solvent extraction plant—a 500-ton-per-day Rotocel.

Still moving horizontally to improve its competitive position, near the end of last year it completed installation of another Blaw-Knox Rotocel, again the world's largest, a 1,200-ton-per-day unit.

To disconnect the old Rotocel and

install the new, the plant lost only 13 days of production.

The reason for making the move to a 1,200-ton-per-day Rotocel is simple, according to Honeymead's



DWARFING the workman spraying water under the miscella tank in the background is the 1,200-ton-per-day Rotocel to the left.

management. In order to maintain a top competitive position, a company must take advantage of all the technological advancements. Without these capital investments for new and more efficient plant equipment, the spiraling costs of production would eat away at the operating margin taking the narrow profit out of the crushing business.

Adding to this, they point out that in switching from a 500-ton-per-day unit to 1,200 tons, more than doubling output, the production costs do not increase proportionately.

In 1955 Honeyamead installed a continuous refining system for degumming soybean oil. By making the product it sells more valuable and by keeping the manufacturing costs in line as the product is refined, it has a factor working for it in holding its operating margin against generally increasing production costs.

Controlling the crushing cost is the one sure way to make an oil plant a going concern. One big step in the reduction of those costs was installation of the 1,200-ton Rotocel.

This year, Honeyamead will spear some bigger fish. The Blaw-Knox Co. is now engineering a fat deodorization system for the firm.

Once again this will be the largest of its kind in the world, according to the manufacturers.

Reduced to sales terms, this means Honeyamead can, if it wants, bottle the oil it produces and refine and sell it as a salad oil. However, according to Honeyamead's management, it won't. Honeyamead will sell it in bulk tankcars and tanktrucks to others who will use it in food and industrial products. But the product will be upgraded and it will be able to retain or increase the operating margin.

In making the big switch from the feed business to the crushing business, much of the cost of moving the product was dropped. Rather than over-the-road salesmen, Honeyamead does most of its buying and selling over a battery of nine telephones, in two offices. Domestic and export business is completed in bulk sales to refiners, exporters, and feed manufacturers.

The Solvent Plant

The plant is simple but efficient.

The beans can be dropped into the plant by rail or truck. They are automatically conveyed either to storage bins—one of several totaling 1.3 million bushels capacity.

From the vibrating screen the beans are continuously conveyed to the cracking rolls which reduce the beans to about one-eighth original size. They use five mills in parallel for this operation.

But to get the bean properly prepared for extracting its oil, it must be flaked and this cannot be done until it has been heated to about

150 degrees. So, the beans are conveyed to the Blaw-Knox conditioner, a tub-shaped tumbler with steam pipes installed inside. From there they go to the flakers. Right now there are 10 flakers with a total capacity of about 1,000 tons per day. Plans are underway for installing more of these.

From the flakers the beans, rolled from spheres into soap-flake shapes, are conveyed to the Rotocel, a solvent-percolation type oil extractor. Essentially, the machine consists of a large rotor made up of 18 sector-shaped cells having hinged screen doors for bottoms. The doors are normally kept closed by rollers riding on a supporting track. Above the rotor are mounted solvent spray heads and beneath it is a circular drainage pan divided into compartments. The entire mechanism is enclosed in a gas-tight housing.

A gas-tight screw conveyor mixes enough miscella with the flakes to form a slurry which it feeds to each cell as the rotor revolves. As the cells move around the circular path, they are flooded by successive washes of miscella gradually approaching fresh solvent in composition. The last spray is of fresh solvent (hexane), after which the solids are permitted to drain by gravity before the door bottom trips and dumps them into an outgoing conveyor.

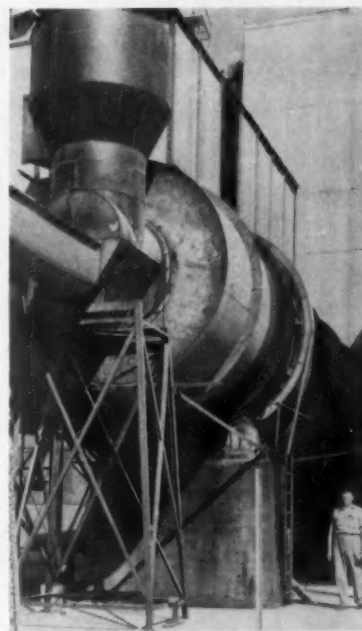
The arrangement of the drainage basin into stage compartments permits spraying the contents of each cell with relatively low-solvent-concentration miscella at the start of its journey around the circular path, and progressively stronger doses until the last spray of fresh full-strength solvent. Final miscella, leaving the drainage compartment, is filtered through a fresh cell of flakes. From here it is pumped to the distillation system where the solvent and soybean oil are separated.

High Oil Yield

The Rotocel method of feeding solvent countercurrent to the travel of the soybean flakes with closely preset drainage periods produces the greatest quantity of oil per pound of bean flakes, and assures a minimum amount (0.3% to 0.5%) of residual oil remaining in the spent flakes.

Leaving the Rotocel, the flakes are dropped into toasters which raise their heat sufficiently to drive off the hexane which is condensed for further use and then these flakes are cooled in a tumbling, gravity flow, countercurrent cooler. From there they go to still another grinder to break up lumps which may have formed during the tumbling-cooling process.

More than moving vertically on the oil front, Honeyamead has done some thinking on the meal line. They



LESS THAN .5% of oil is left in the flakes as they are conveyed from the toasters into this tumbling, countercurrent air cooler. Flakes are gravity discharged to grinders where any lumps caused by toasting and cooling are reduced.

now produce two types of soy flour which is used principally as an industrial adhesive, 44% protein meal, and a line of extruded pellets for livestock feed as well as a 50% protein meal.

Margarine Income Big

MARGARINE put more than \$90 million into the pockets of American soybean growers last year, it is estimated by the National Association of Margarine Manufacturers.

In 1956, margarine used a record 751 million pounds of refined American soybean oil, representing the equivalent of some 3,375,000 acres of soybeans. This volume is greater than the entire 1956 acreage of soybeans harvested for beans in either Minnesota, Iowa, or Indiana and exceeds the combined 1956 acreage of Ohio and Missouri.

The soybeans that were crushed to supply oil for margarine last year also provided an estimated 1,652,637 tons of high-protein meal, an important feed supplement for dairy cattle, other livestock, and poultry. By providing a market for soybean oil, margarine makes it possible for the meal portion of the soybeans to be sold in feeds at lower cost.

Margarine is expected to use as much or more soybean oil during 1957 as it did in 1956, thereby providing a major market outlet for last year's record U. S. soybean crop.

Sees Increase in Soybean Acres

SOYBEAN ACREAGE expansion will continue in 1957 to an expected total national planting of 22.7 million acres, according to the U. S. Department of Agriculture crop reporting board's Mar. 1 planting intentions report.

This will mean 8 years of successive increase starting with 1950 during which soybean acreage has nearly doubled. This year's moderate gain of 4% is due to increases in most main producing states with Illinois, Minnesota, Iowa and Arkansas leading in expansion.

The government support price for the 1957 crop of soybeans was announced well in advance of the date farmers reported their March intentions. However, any changes this spring in other government programs, especially for corn, and the ability to plant other spring crops due to weather may affect the acreage actually planted to soybeans.

Trend of the market in the next few weeks is also bound to affect producer thinking with regard to 1957 soybean acreage.

Moderate increases over last year are reported in all major areas and for most states except where drouth in 1956 caused severe damage or where harvesting was hampered by bad weather last fall.

In the North Central states, the major producing area, all states indicate increases except Missouri, Nebraska and Kansas. Decreases in those states are probably due to discouraging yields received by many growers because of the drouth.

Increases ranged from 2% in Indiana to 10% in each of the Dakotas. Ohio and Illinois each show increases of 6%, Iowa 5% and Minnesota 7% above last year.

The South Atlantic area shows a gain of 7% over last year. Most states in the area indicate some increase over 1956, except Virginia with an expected decrease of 8%. Farmers in that state had considerable difficulty last season in getting the crop harvested because of continued wet weather and some report they are increasing corn acreage and reducing soybeans.

The South Central area indicates only a slight gain over last year. Much of this is in Arkansas with an increase of 7%. The Oklahoma crop was severely damaged by drouth last year, and farmers in that state plan to reduce their acreage by nearly one-fourth. The principal soybean area in Mississippi also suffered drouth damage last year and a slight decrease is expected for that state.

Growers do not report on the acreage of soybeans intended for harvest as beans on Mar. 1, and no forecasts of such acreage or production of soybeans for beans are made at this time.

However, if growers plant their intended acreage of soybeans alone for all purposes and about the same proportion of total acreage is harvested for beans as last year, about 21.7 million acres would be utilized for this purpose. This compares with 20.9 million acres harvested in 1956.

Applying the 1951-55 average yield, by states, to the computed acreage for beans, the production this year would be about 430 million bushels. This would be slightly below the 1956 record crop of 456 million bushels.

United States: Planted and harvested acreage of soybeans, 1939-1957

Year	Grown alone Thousand acres	Harvested for beans Thousand acres
1939	9,565	4,315
1940	10,487	4,807
1941	10,068	5,889
1942	13,696	9,894
1943	14,191	10,397
1944	13,118	10,245
1945	13,056	10,740
1946	11,706	9,932
1947	13,052	11,411
1948	11,987	10,682
1949	11,872	10,482
1950	15,048	13,807
1951	15,176	13,615
1952	15,958	14,435
1953	16,394	14,829
1954	18,541	17,047
1955	19,658	18,620
1956	21,970	20,926
1957 ¹	22,745	.....

¹ Planting intentions.

SOYBEANS
Crop production, March 1957, crop reporting board, AMS, USDA

State	Acreage planted ¹			
	Average 1946-55 1,000 acres	1956 1,000 acres	Indicated 1957 1,000 acres	1957 as percent of 1956
N. Y.	8	9	6	67
N. J.	37	51	54	106
Pa.	50	55	52	94
Ohio	1,053	1,339	1,419	106
Ind.	1,763	2,228	2,273	102
Ill.	3,871	4,785	5,072	106
Mich.	113	207	219	106
Wis.	68	96	105	109
Minn.	1,259	2,697	2,886	107
Iowa	1,778	2,597	2,727	105
Mo.	1,388	2,005	1,905	95
N. Dak.	32	180	198	110
S. Dak.	88	237	261	110
Nebr.	80	171	128	75
Kans.	395	408	339	83
Del.	74	155	170	110
Md.	106	219	237	108
Va.	201	293	270	92
W. Va.	13	8	7	88
N. C.	392	494	543	110
S. C.	120	280	325	116
Ga.	77	107	122	114
Fla.	219	40	40	100
Ky.	201	190	196	103
Tenn.	280	308	308	100
Ala.	152	155	166	107
Miss.	457	832	790	95
Ark.	694	1,558	1,667	107
La.	110	185	192	104
Okla.	60	54	41	76
Texas	6	27	27	100
U. S.	14,939	21,970	22,745	103.5

¹ Grown alone for all purposes. ² Short-time average.

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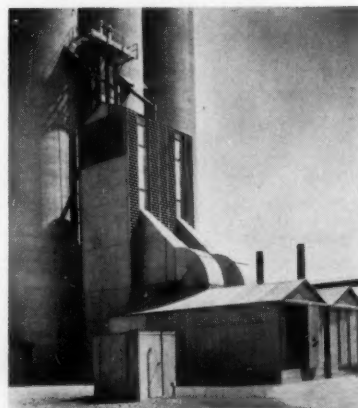
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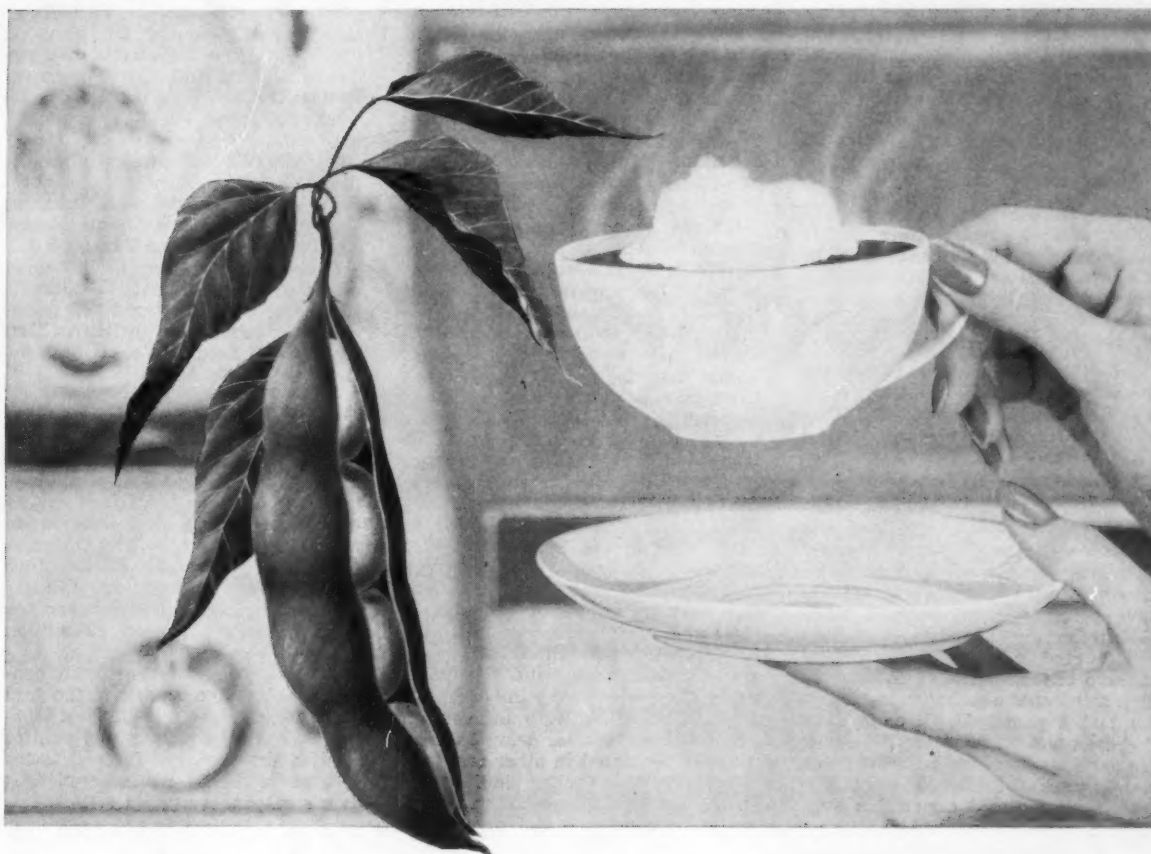
Hollywood, Miss.

Glidden Drier Units



BIG DRYING capacity is shown at close range in this view of the twin Shanzer Manufacturing Co. drier units at the Glidden Co.'s new 3-million-bushel house in Chicago. The manufacturer calls the drying and cooling installation one of the largest in the world.

One of a series of advertisements appearing in **Business Week** as part of Glidden Chemurgy's continuing efforts to expand the market for soy products



Soybeans that work in the kitchen may help you improve your products

Soybean derivatives are important in the manufacture of a wide variety of products, and may help you improve your product, too. More than 26 grades of *special-purpose* soy lecithin, developed and produced by Glidden Chemurgy, are specifically formulated for individual industries.

In the *food industry*, for example, one grade of Glidden lecithin helps make instant foods really instant. Another grade is used in the manufacture of margarine to improve both flavor and cooking qualities. In baking, still another grade makes for better handling and mixing of dough, with resulting improvement in softness, texture and other important qualities of the finished product. Glidden *special-purpose* lecithins speed up your blending or dispersing operations . . . provide better emulsification.

Glidden is the leading soybean processor continuing operations beyond the crude products level, to produce *special-purpose* derivatives to help improve your product and reduce production costs. Call or write Glidden Technical Service for ideas and assistance.

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THE GLIDDEN COMPANY
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MANUFACTURERS OF INDUSTRIAL AND EDIBLE SOY FLOURS AND PROTEIN, CRUDE AND SPECIAL-PURPOSE LECITHINS, STEROIDS, SOYBEAN MEAL AND OILS.

1956 World Crop 854 Million Bu.

WORLD PRODUCTION of soybeans in 1956 is estimated at 854 million bushels by USDA's Foreign Agricultural Service. This confirms the November 1956 estimate of a record crop for the third successive year, exceeding 1955 estimated output by over 10% and average prewar production by 86%.

About 96% of the estimated 85.8-million-bushel increase from 1955 is accounted for by the expansion in the United States. Some increase is reported for China-Manchuria, but the actual extent of the increase is still largely speculative.

Relatively small increases are recorded for Brazil, South Korea, Nigeria, Taiwan, Thailand and Turkey. Smaller crops were produced in Japan, Canada, Indonesia, and Yugoslavia.

The United States and China-Manchuria produce over 90% of the world's soybeans and export nearly all of the beans and oil that move in world trade. Total world exports have been trending upward since 1953, reflecting expanded production and limited supplies of competing oils and oilseeds. The U. S. share of such shipments also has increased in the last 2 years. U. S. exports of soybeans and oil from the 1956 crop are expected to reach a record level, mainly reflecting strong world demand and reduced exportable sup-

plies of competing oils and oilseeds.

Soybean production in the **United States** in 1956 is estimated at a record 455,869,000 bushels from a record 20,926,000 harvested acres. This is an increase of 22% from the previous high produced in 1955.

Canada harvested 4,935,000 bushels of soybeans in 1956, a decline of 13% from the record crop of 1955.

On the basis of claims of a substantial increase in soybean acreage in 1956 in **China-Manchuria**, particularly in the northeast, as well as claims of increased output, also in the northeast, total production in all China may have been somewhat larger than in 1955. On the other hand, in view of the extensive floods reported to have occurred in the major soybean-producing areas, it appears unlikely that overall production increased extensively from the previous year. Consequently, the 1956 crop currently is believed to have been in the neighborhood of 340 million bushels.

Japan's crop has been estimated at 16.7 million bushels, a decrease of 10% from the near-record 18.6 million bushels harvested in 1955. Acreage increased somewhat in Hokkaido, the major producing area, but growing conditions were unfavorable due to below normal temperatures. Acreage decreased in other areas.

Contrary to earlier indications, production in **Indonesia** is now re-

ported at 12.6 million bushels or slightly less than in the previous year. Output in **Yugoslavia** also was down slightly and the harvest in **Eastern Europe** was believed to be somewhat lower.

Likewise, contrary to earlier reports, **Brazil's** 1956 production at almost 4.4 million bushels was slightly larger than in 1955. Larger crops also were reported for **South Korea, Thailand, Taiwan** and **Turkey**.

Soybean production in Africa is relatively insignificant. **Nigeria** is the major producer but small quantities also are grown in **British East Africa**, the **Belgian Congo** and the **Union of South Africa**.

1956 Set Feed Record

A RECORD-BREAKING production of 35.7 tons in 1956 set an all-time high for the American feed manufacturing industry according to an announcement by W. E. Glennon, president of the American Feed Manufacturers Association, Chicago. Previous high was in 1954 when the feed industry produced 35 million tons.

The estimate was based on confidential tonnage reports to the feed association from companies producing 49% of all livestock and poultry feed in the country. Their data indicated a 6.4% increase in last year's output, compared to 1955.

SOYBEANS: ACREAGE, YIELD PER ACRE AND PRODUCTION IN SPECIFIED COUNTRIES AND THE WORLD, AVERAGE 1945-49 AND ANNUAL 1954-1956¹

Continent and country	Acreage ²				Yield per acre				Production			
	Average 1945-49	1954	1955	1956 ³	Average 1945-49	1954	1955	1956 ³	Average 1945-49	1954	1955	1956 ³
		1,000 acres				Bushels				1,000 bushels		
North America												
Canada	73	254	214	228	20.5	19.5	26.4	21.6	1,491	4,953	5,650	4,935
United States ⁵	10,649	17,047	18,620	20,926	19.6	20.0	20.1	21.8	208,885	341,075	373,522	455,869
Europe												
Italy	4	1	1	—	17.8	22.1	22.1	—	74	24	14	—
Yugoslavia	15	3	7	7	10.1	15.0	18.0	12.4	155	48	123	92
Other Europe	70	95	95	100	—	—	—	—	455	535	565	555
Asia												
Turkey	4	4	12	12	10.9	12.4	12.3	13.9	+5	154	147	203
China	11,256	7,048	1,298	1,273	16.9	16.5	11.3	9.9	190,248	7334,000	7335,000	7340,000
Manchuria	4				16.5				4 116,475			
Indonesia	872	1,298	1,273	1,210	11.2	11.3	9.9	10.4	9,736	14,712	12,722	12,559
Japan	587	1,082	952	947	12.2	12.8	19.6	17.7	7,178	13,816	18,632	16,735
Korea ⁶	583	637	664	664	8.5	9.2	8.2	8.7	4,978	5,890	5,464	5,775
Taiwan (Formosa)	32	74	85	89	9.4	10.0	10.4	11.6	297	746	887	1,032
Thailand	4	17	55	53	10.1	14.7	13.7	—	167	808	735	845
South America												
Brazil	23	168	198	197	19.0	25.6	19.9	22.2	446	4,311	3,927	4,364
Africa												
Nigeria	—	—	—	—	—	—	—	—	35	353	372	560
Union of South Africa	4	10	—	—	—	—	—	—	54	—	167	200
Total excluding "Other Europe," U.S.S.R., Chinese Mainland and North Korea	12,940	20,770	22,220	24,475	—	—	—	—	234,155	387,815	423,270	504,070
World total ¹⁰	32,650	42,800	44,255	49,015	—	—	—	—	551,290	731,720	768,205	853,995

¹ Years shown refer to years of harvest. Southern Hemisphere crops which are harvested in the early part of the year are combined with those of the Northern Hemisphere harvested the latter part of the same year. ² Figures refer to harvested areas as far as possible. ³ Preliminary. ⁴ Average of less than 5 years. ⁵ Acreage harvested for beans. ⁶ One year only. ⁷ Unofficial estimates. ⁸ Beginning with 1948 figures represent South Korea only. ⁹ Exports. Local consumption is small. ¹⁰ Includes estimates for the above countries for which data are not available and for minor producing countries. Foreign Agricultural Service. Prepared or estimated on the basis of official statistics of foreign governments, reports of agricultural attaches and other U. S. representatives abroad, results of office research, or other information. Prewar estimates for countries having changed boundaries have been adjusted to conform to present boundaries, except as noted.



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THE PRE-TESTED NITROGEN INOCULATION
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Wet Inoculants Best in USDA Tests

BACTERIAL INOCULANTS for legumes can be applied to the seeds at planting time either with or without the use of water. In the past, water has been used more often than not. Either the seed itself is moistened lightly prior to adding the bacterial inoculant or else sufficient water is mixed with the inoculant to make a thin paste which in turn is mixed with the seed. Either of these procedures is known as "wet" inoculation.

In "dry" inoculation, the bacterial inoculant is added directly to the dry seed in the planter or drill box. The practice appeals to operators because it eliminates any extra or pre-planting handling of the seed and inoculant.

It also eliminates the danger of seed-coat swelling and shedding with the possibility of having to dry the wet seed should inclement weather delay planting operations. These latter troubles are commonly due to use of too much water or to the mixing of too much wet seed in advance.

There is no gainsaying the desir-

ability of using the simplest operation compatible with satisfactory results.

Several manufacturers of legume inoculants now advertise that their inoculants can be added either wet or dry. Others are recommending that dry inoculation be used only on large-seeded legumes such as soybeans and that wet inoculation be practiced on small-seeded legumes.

Still others recommend only wet inoculation.

Information concerning the relative efficiency of the two methods remains very scanty.

In response to inquiries directed to the Soil and Water Conservation Research Branch, U. S. Department of Agriculture, asking about the extent of inoculant retention with and without water, tests have been made on laboratory-prepared humus inoculants with known bacterial and moisture contents. Wet and dry treatments were made with inoculants added to seeds at the usually recommended field rates. All results were computed to show percent of viable legume bacteria retained

on and transferred with the seed in relation to the total number of such bacteria available for transfer.

In four separate experiments designed to introduce several known handling variables, retention of bacteria on dry-inoculated soybeans ranged from 2% to 9% of the number initially applied, and on wet-inoculated soybeans, from 43% to 62%.

Tests were also made using a number of commercial inoculants purchased on the open market. Each inoculant was compared for its relative retention on wet and dry seeds of soybeans.

The same pattern of results was obtained with these inoculants as with the laboratory preparations, even though measurements were made by a different procedure.

Inoculant retention on dry soybeans averaged 8%; on wet soybeans, 83%.

No tests were designed fully to compare one commercial inoculant against another, but the several inoculants that were used did not differ appreciably one from another in their ability to adhere to seeds.

Taken at their face value, the results indicate that if a given quantity of a soybean inoculant is satisfactory when applied dry, then that same quantity of inoculant would be equally satisfactory for up to five times as much soybean seed if applied wet, assuming that the inoculant that is separate from seeds does not drill at all uniformly with the seeds.

Until field evidence is available that the fractional retention secured by dry inoculation is entirely adequate, it appears safest to employ wet inoculation at the presently recommended rates.

LEGUME INOCULATION — WET OR DRY? By Francis E. Clark, microbiologist, soil and water conservation research branch, Agricultural Research Service, Beltsville, Md. Journal of Soil and Water Conservation, Vol. 11, No. 5, September 1956.

BLUE BOOK. The 1957 edition of the Soybean Blue Book, soybean industry year book, was mailed to subscribers in mid-March.

The 1957 edition comprises 160 pages and cover. It is published by the American Soybean Association.

Included in the Soybean Blue Book for the first time this year are maps showing the average maturity dates of leading soybean varieties at different locations. The maps were compiled by workers at the U. S. Regional Soybean Laboratory, and

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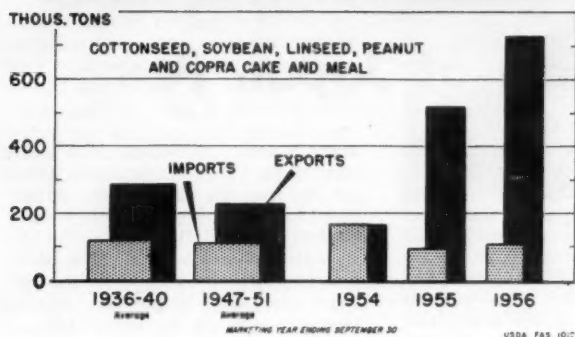
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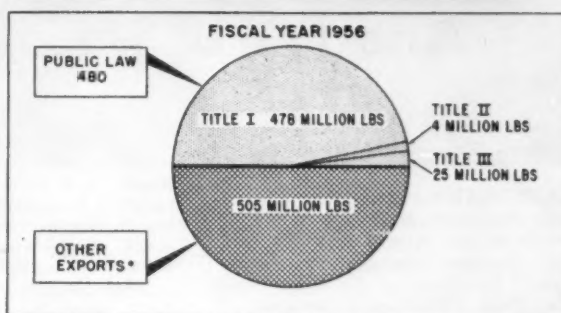
Dept. 504, 618 W. Jackson Blvd., Chicago 6, Ill.



U. S. exports and imports of oilcake and meal



One half U. S. soybean and cottonseed oils exported under P. L. 480



give information that has not been generally available up to now.

Also assembled for quick reference are the latest available statistics on production, prices and utilization of soybeans, meal and oil. There are directories of soybean processors, oil refiners, and manufacturers using soy products in their operations, as well as firms offering their services and products to the soybean industry.

The book is available at \$3 per copy from the American Soybean Association, Hudson, Iowa. Members may obtain additional copies at a price of \$1 each.

HOUSEHOLD FATS. Households in the South use more flour, fats, sugar and soups than those in other regions of the country, and purchase smaller amounts of bakery products, according to a report for the Southern region of the household food consumption survey conducted by the U. S. Department of Agriculture.

The report deals with food consumption in the South, where 2,063 households were surveyed.

USDA researchers discovered that southern households reporting in the survey used an average of 3.5 pounds of table fats, shortenings, salad dressings and oils compared with 3 pounds for the United States.

The southern average included two-thirds pound of margarine, almost one-half pound of butter, 1 pound of lard, three-fifths pound of other shortenings, and three-fourths pound of salad dressings and oils. Two-thirds of all southern households used margarine; 40% used butter.

FOOD CONSUMPTION OF HOUSEHOLDS IN THE SOUTH. Household Food Consumption Survey 1955 Report No. 4. Office of Information, U. S. Department of Agriculture, Washington 25, D. C.

EXPORT MARKETS. An annual report summarizing its activity in regaining, maintaining and building markets for U. S. farm products has been published by the U. S. Department of Agriculture.

The report, "Developing Foreign Markets for U. S. Farm Products," is a 54-page illustrated publication, summarizing foreign agricultural market promotional activities by programs and projects, and by separate commodities.

This is the first publication that gives a general summary of export market development operations of USDA's Foreign Agricultural Service. These promotional activities constitute one of the main purposes of establishing the agency in the reorganization of the Department in 1953.

Use of part of the foreign currencies acquired by surplus sales under Title I of Public Law 480 for market development projects abroad is contributing to the work being carried on in this field.

In citing an 11% gain in value of farm products in 1955-56, the report states that prospects for 1956-57 are even more favorable.

Activities covered by the report include: U. S. trade programs, reducing foreign trade barriers, market surveys and analysis, projects using foreign currencies, international trade fairs, private trade activities, and market information and services.

DEVELOPING FOREIGN MARKETS FOR U. S. FARM PRODUCTS. Foreign Agricultural Service, Room 5922, U. S. Department of Agriculture, Washington 25, D. C.

SOUTHERN CROPS. A bibliography that should be of interest to anyone concerned with processing and utilization of Southern farm crops, or scientific research on such commodities, is now available.

It is a list of publications and patents for January-June 1956 issued by the Southern Utilization Research Branch.

Included in the list are papers

on cottonseed oil and meal and flaxseed. There is new information on gossypol in cottonseed and its products.

LIST OF PUBLICATIONS AND PATENTS, SOUTHERN UTILIZATION RESEARCH BRANCH, JANUARY-JUNE 1956. Southern Utilization Research Branch, 1100 Robert E. Lee Blvd., New Orleans, La.

PERFORMANCE OF RECOMMENDED SOYBEAN VARIETIES IN SOYBEAN VARIETY TESTS, 1953-55. By Ralph Matlock and Frank Woolridge. Mimeographed Circular M-278. April 1956. Agricultural Experiment Station, Stillwater, Okla.

THE VERSATILE SOYBEAN HAS BECOME THE UNITED STATES FOURTH-RANKING FARM EXPORT. Foreign Agriculture, January 1957. Foreign Agricultural Service, U. S. Department of Agriculture, Washington 25, D. C.

PTC
ELECTRONIC TEMPERATURE INDICATING INSTRUMENTS

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PTC Electronic Temperature Indicating Systems are in use throughout the world . . . saving grain, money and time.

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Another U. S. Exhibit at Japan Fair

By SHIZUKA HAYASHI

Managing Director, Japanese-American
Soybean Institute, Tokyo, Japan

LAST YEAR the International Trade Fair was held in Osaka, Japan, in which as you remember the American Soybean Association participated. Representing the Association was Ersel Walley, past president of the American Soybean Association, who came to Japan, planned and successfully guided the soybean exhibit with Marion Hartz later joining him.

This year a similar fair will be held in Tokyo.

On a site of approximately 800,000 square feet located on reclaimed land near the Tokyo Harbor, within a 20-minute drive from the Tokyo business center, which has been allotted to the International Fair this year, an independent U. S. agricultural pavilion measuring about 15,000 square feet is now under construction to be used to exhibit U. S. agricultural products including soybeans, wheat, tobacco, cotton, dried foods, tallow and dairy products.

Under an agreement signed on Mar. 14 between the contracting officer of the American Embassy jointly with A. J. Martin, the director of U. S. agricultural exhibits, and the Japanese-American Soybean Institute, a space of 1,100 square feet will be provided by FAS without charge within the above mentioned U. S. agricultural pavilion for the soybean exhibit. The size of the space will be 110 feet long by 10 feet wide with a wooden partition stretching at the back of the entire 100-foot length standing 10 feet in height. On the opposite side of the alley facing our soybean booth, there will be tobacco, dried foods and dairy products booths.

Ten feet out of 110 feet at one end will be made into an office room or a conference room for visitors who wish to get information or talk business with the officials of the different soybean groups. One hundred feet will be divided into five sections: 40 feet for the American Soybean Association and 15 feet each for the Japanese Oil Processors Associ-

ation, Shoyu Association, Miso Association, and Tofu Association, which are the four members of the Japanese-American Soybean Institute. Each group will be responsible for its exhibits and also for furnishing a technician who will be able to explain and talk business covering his products with visitors interested.

Samples, pamphlets, statistics and other materials for demonstration purposes will be contributed by each group. The setting up of a space for the exhibits will be financed from funds allocated to the Japanese-American Soybean Institute by the Trade Fair authorities. The designing, decorations and setting up of the whole 100-foot-length exhibit space together with the entire background are to be taken care of by this Institute.

Several bids with sketches for these works are now under preparation by different designers at the request of this Institute.

Other conditions provided in this contract call for responsibilities of this Institute such as arranging for and supervising exhibit construction and exhibit management under overall direction of FAS, and later the exhibits' dismantling and removal; providing services, equipment and exhibit materials without cost to FAS; cooperating with FAS in developing publicity; and other information activities.

Besides technical attendants from each of the four groups the Institute will provide a special man to look after the overall operation of the soybean booth in cooperation with the Fair authorities. Since the object of the American agricultural exhibit is to develop a soybean market in Japan that will be for the mutual benefit of soybean industries both in the United States and in Japan including processors, producers, traders as well as consumers, it is hoped that full cooperation will be given toward the successful achievements of our soybean exhibit.

Renew Market Project For Another 2 Years

THE SOYBEAN market development project for Japan sponsored jointly by the American Soybean Association and the U. S. Department of Agriculture's Foreign Agricultural Service will be continued on an expanded scale for another 2 years, Geo. M. Strayer, ASA's executive vice president, has announced.

INOCULATE SOY BEANS

with



IT PAYS!

The Urbana Laboratories
Urbana, Illinois

It will be operated through the Japanese-American Soybean Institute as in the past.

Negotiations by the Soybean Association with Japanese trade groups were completed by Strayer before he left Japan the last of February.

Negotiations with FAS had been completed and papers were in process as the Digest went to press. Plans call for expenditure of \$150,000 per year for the next 2 years, compared with \$75,000 for the year ending Mar. 31, in behalf of markets for U. S. soybeans in Japan.

Projects will include nutritional educational work employing soybeans on a considerable scale by the Japanese Nutrition Association and the Food Life Improvement Association in Japan.

Japanese Group in U. S.

A GROUP of representatives from the fats and oils processing industry in Japan are pictured on a recent visit to the Southern Utilization Research and Development Division of the Agricultural Research Service, USDA, in New Orleans, La.

Shown, seated, left to right, are: Katsuro Ito, chief of the Management Control Bureau, Kao Soap Co., Ltd.; Shinichi Tomiyama, secretary of the group, and chief of the re-



search department, Lion Oil & Fat Co., Ltd.; Kagemasa Unno, group leader, and managing director of Asahi Electro-Chemical Co., Ltd.

Dr. C. H. Fisher, director of the Southern Utilization Research and Development Division; Heihachi Ezaki, assistant leader, and managing director, Marumiya Co., Ltd.; Zensaku Isobe, managing director, Daiichi Kogyo Seiyaku Co., Ltd.; and Richard Swain, project manager for the International Cooperation Administration.

Standing, left to right, are: Kei Murata, secretary of the head office, Japan Federation of the Chemical Trade Union; Seishi Shinya, chairman of consultant committee, Marumiya Co. Workers' Labor Union; Narayoshi Miyazaki, managing director, Kyoshinsha Oil & Fat Industry Co., Ltd.; Masao Hirose, manag-

ing director, Yokohama Oil & Fat Co., Ltd.

Shinobu Hyakutake, chief of research section, Shiseido Co., Ltd.; Yasushi Matsuzaki, executive member of Lion Oil and Fat Labor Union; and Akido Shimizu and Hideo Ishihara, interpreters.

The group was visiting this country to study methods with a view to improving the fats and oils processing industry in Japan.

Lose Oil Tanker

THE S. S. PERMA sank in the Gulf of Mexico with a cargo of 13,500 tons of soybean oil Mar. 18 after two explosions and a fire rocked the 445-foot Liberian tanker.

The crew abandoned the Liberian tanker, which was bound for Italy.



... yes,

**Some are
Better ...
than others!**

Know-how, unlimited service, and fair, honest treatment for buyer and seller—these are the distinguishing marks of the Association member. . .

National Fats & Oils Brokers' Association

GRITS and FLAKES . . . from the World of Soy

Kellogg-Beacon Merger

A merger of **Spencer Kellogg & Sons, Inc.**, Buffalo, N. Y., and **Beacon Milling Co.**, Cayuga, N. Y., has been agreed to in principle by the directors of the two companies, Howard Kellogg, Jr., president of the Kellogg firm announces.

Subject to stockholder approval and following final negotiations, which are currently being carried on, an effective date of the consolidation will be announced.

The merger brings together two outstanding leaders in their respective fields. The Kellogg family were pioneers in the linseed oil trade commencing in 1824. Other vegetable oils, such as soybean, castor, coconut, cottonseed, etc., have been added to its growing line.

Beacon Milling was started in 1920 and has taken its place in the top group of feed manufacturers.

Management of Beacon will be continued in its present form with headquarters in Cayuga. Representation will be accorded Beacon with the inclusion of two of its management members on Kellogg's board of directors.

Merger with Beacon Milling will provide a substantial outlet for several of Spencer Kellogg's products.

Opens New Laboratory

Woodson-Tenent Laboratories, Memphis, Tenn., has opened its eighth laboratory at Wilson, Ark., to serve the soybean industry. The firm analyzes all kinds of agricultural products, including oils,

greases, feeds and fertilizers.

B. L. Keating has been transferred from the Memphis laboratory to be manager of the Wilson laboratory.

Other laboratories are located at Little Rock, Ark., Blytheville, Ark., Clarksdale, Miss., Chicago, Ill., Cairo, Ill., and Des Moines, Iowa.

E. H. Tenent and P. F. Woodson organized the Memphis laboratories in 1935, and since that time have analyzed over a million samples. E. H. Tenent, Jr., was made a partner in 1955. He has been with the company for 10 years.

Woodson-Tenent Laboratories are official chemists for the National Soybean Processors Association, Chicago Board of Trade, Cairo Board of Trade, and referee chemists for American Oil Chemists Society.

Wojciech Promoted

A. E. Staley Manufacturing Co., Decatur, Ill., has announced the promotion of Paul J. Wojciech to the position of assistant superintendent of its terminal elevators. Superintendent is Harold C. Wilber.

Wojciech has been with the Staley Co. since 1947, when he became a draftsman in the engineering department. Since 1954 he has been assistant superintendent in the wet starch department.



Paul J. Wojciech

Form New Firm

Davidson-Kennedy Co., 69-year-old Atlanta, Ga., manufacturing firm, has announced the formation of **Davidson-Kennedy Associates**. The new firm will act as an engineer-contractor and will carry out the design, procurement of equipment and materials, and erection of chemical process plants and facilities. Offices will be in Chicago and Atlanta.

Appointment of James E. Iliff as vice president-general manager of Davidson-Kennedy Associates Co. has been announced by A. T. Kennedy, president. He will direct the Chicago office of the engineer-contractor firm. Mr. Iliff was formerly chief process engineer of the Blaw-Knox Co., chemical plants division, Midwest headquarters.

T. L. Lewis has been named acting manager of the **New Orleans Public Grain Elevator**, replacing Col. Marcel Garsaud.

Central Soya Co. has become a clearing member of the Chicago Board of Trade, and Donald O. Cuthbert has been named to manage the new clearing operations. He will make his headquarters in the Central Soya offices at 3718 Board of Trade Building in Chicago.

At a recent meeting of the board of directors of **Cockshutt Farm Equipment Inc.**, Bellevue, Ohio, C. Gordon Cockshutt retired as president of the company and Ray Bishop was elected president. Mr. Cockshutt becomes chairman of the board. Bishop is general manager of Cockshutt Farm Equipment, Ltd., Brantford, Ontario, the parent company. G. A. Uhlmeier was elected vice president.

George R. Vila has been elected a vice president of **U. S. Rubber Co.** and appointed general manager of the Naugatuck chemical division. He replaces John E. Caskey who is retiring after serving 42 years with the company. Mr. Vila joined the company in 1936.

Buckeye Cellulose Corp., has announced the sale of its Greenwood, Miss., vegetable oil mill to Yazoo Valley Oil Mill, Inc., a newly organized Greenwood firm. Buckeye purchased the mill in 1902 and modernized it in 1952 for the solvent extraction of oil from cottonseed and soybeans.

Allen P. Patten has been named manager of the Boston office of **Carlin, Inc.**, a subsidiary of **Cargill, Inc.** He will succeed John K. Yarger, who has been appointed manager of vegetable oil sales for Cargill's Philadelphia office. Mr. Patten joined Cargill in 1954 and has been mainly concerned with the sale of soybean and linseed oils and alkyl resins to the New England paint and varnish industry.

ELECTRONIC PROFIT CONTROL FOR THE SOYBEAN GROWER

The RADSON MOISTURE TESTER

Here's a machine to measure the moisture content of grain that is PORTABLE, ACCURATE and SENSIBLY PRICED. The RADSON will work from the cigar lighter of a car or truck, as well as 110 Volt A.C. It's designed for elevator accuracy, but it's still tough enough to go into the field. And it's priced low enough that it will pay for itself in very short order. For more information, write us at the address below.

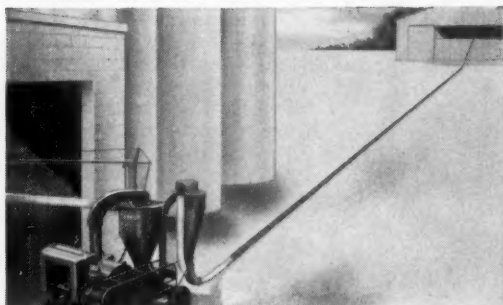
A Few Choice Dealerships Are Still Available

RADSON ENGINEERING CORPORATION
MACON, ILLINOIS



Direct reading . . . all grains . . . no charts needed. Versatile, portable, lightweight, designed for elevator accuracy, low priced, fully guaranteed. Models for 6 or 12 Volt D.C. or 110 Volt A.C.

ONLY VAC-U-VATOR WILL DO ALL THESE GRAIN HANDLING JOBS



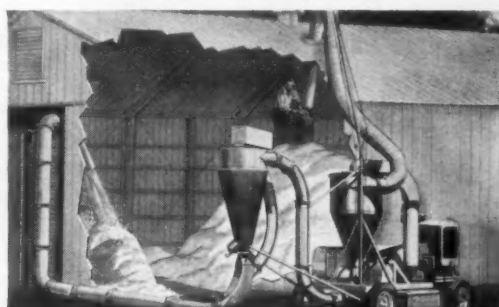
CONVEY grain up to 300 feet away. Vac-U-Vator is ideal for big, but intermittent jobs that do not justify a permanent installation.



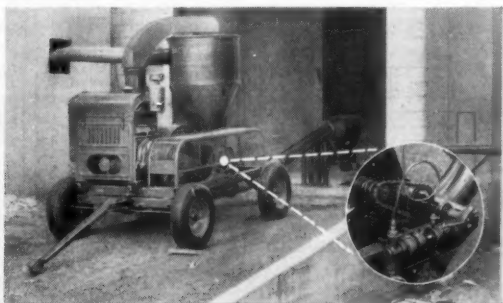
TRACK-LOAD from trucks, flat storage, bin sites. Vac-U-Vator is fully portable with self-contained power unit. Can be used anywhere.



CLEAN grain while it conveys. Vac-U-Vator removes insects, rodent pellets, broken kernels, odors. Enables you to up-grade grain that might otherwise suffer heavy discounts.



TURN and clean grain in flat storage or bins with a minimum of extra storage capacity. It's an easy job with a Vac-U-Vator to skim off crust, clean out dirt columns and remove "hot spots."



TREAT grain while you convey or turn it. Special insecticide applicator can be mounted on Vac-U-Vator to apply protectants to each kernel.



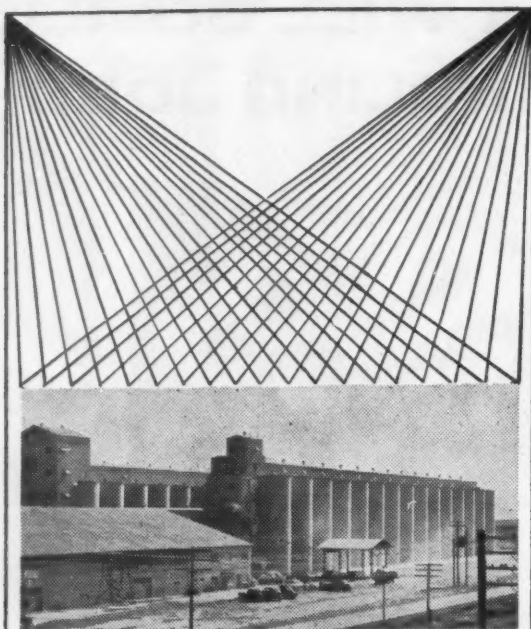
ELEVATE grain up to 75 feet. During rush periods, a Vac-U-Vator can serve as an extra leg to boost your grain handling capacity.

On any of these jobs, Vac-U-Vator will save you hundreds of dollars annually. Often pays for itself the first year. Industrial Vac-U-Vator for handling other bulk commodities also available. For details, write Box 355-4, Batavia, Illinois

VAC-U-VATOR DIVISION
DUNBAR KAPPLE, INC.

A Subsidiary of General American Industries, Inc.
GENEVA, ILLINOIS

MFRS. OF AGRICULTURAL VAC-U-VATORS, INDUSTRIAL VAC-U-VATORS, FEED-O-VATORS, WIND-REELS, AIRCRAFT COMPONENTS AND CONTRACT MANUFACTURING



IT PAYS TO HAVE THE TRUE FACTS ABOUT YOUR STORED GRAIN

Yes, in order to be sure — ABSOLUTELY SURE that your grain is safe, you must know its true condition. You can rely on guesswork or years of experience if you want to, but costly losses are sure to happen.

The modern grain man lets the Hot Spot Detector System take all the guesswork out of storing grain. Because the Hot Spot System gives you accurate temperature readings, you always *know* the condition of your grain. When grain starts to turn you can do something about it before a great deal of damage occurs.

Yes, it is possible to store grain safely. For example, Mr. C. Everette Salyer of Salyer Grain & Milling Company, Corcoran, Calif., writes us, "With Hot Spot Detector and an aeration system, I believe any commodity can be stored safely."

Worth investigating? Just drop us a card or letter for complete information. You're under no obligation, of course.

HOT SPOT DETECTOR, Inc.

213 Third Street • Des Moines, Iowa

NEW PRODUCTS and SERVICES

SPREADER-SEEDER. A 20-foot wide, high speed, spreader-seeder that quickly folds to less than 8 feet in width for highway travel has just been announced by the E. S. Gandrud Co., manufacturer of Gandy equipment.

Fertilizer users have for years desired a fertilizer spreader that would cover a wide swath in the field; but because of the difficulties of transporting a wide machine over narrow country roads and of storage, no manufacturer until now has been able to design a satisfactory machine.

The new Gandy 20-foot folding spreader-seeder is said to overcome all these difficulties plus minimizing the soil compaction problem experienced by truck spreaders in wet fields.

For further information write Soybean Digest 4a, Hudson, Iowa.

CONVEYOR. Fort Worth Steel & Machinery Co. announces a new screw conveyor with advantages for low-cost conveying of virtually all free-flowing bulk materials.

It's the "Fort Worth Beeline" screw conveyor with "automatic straightness." The manufacturer said "Beeline" components are so precise that a 100-foot run will be straight within a fraction of an inch without costly matching, fitting and customary installation adjustments.

The Beeline is said to be automatically straight when assembled, with no need for periodic adjustment to maintain vital straightness. Manufacturer reports it's easy to make the Beeline dust tight.

This screw conveyor is offered at lower prices than previous Fort Worth conveyors.

For further information, write Soybean Digest 4b, Hudson, Iowa.

DISK OPENER. A new John Deere fertilizer disk opener puts either dry or liquid fertilizer in a single band 2½ inches to one side of the seed and at any depth from level with the seed to 1¼ inches below the seed. It can be quickly and easily attached to John Deere corn and cotton planters.

This unit gives farmers accurate and uniform control over their placement of fertilizer.

For additional information write Soybean Digest 4c, Hudson, Iowa.

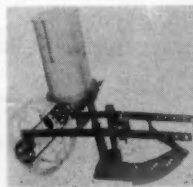


PLANTER. International Harvester has announced a versatile and economical one-row planting unit for use on the Farmall Cub, 100 and 130, and Super A tractors.

The units can also be mounted on the cultivator for International 300 and 350 utility tractors to make a two-row planter.

A wide choice of seed hoppers permits the planting of almost every crop; and an assortment of ground units and attachments makes it possible to plant in the furrow, on the bed, or in the flat.

For further information write Soybean Digest 4d, Hudson, Iowa.



So You Don't Need
BIG Capacity!

**You Do Need
MODERNIZATION...**

**To Handle the Next Grain Harvest
*Fast and Efficiently!***

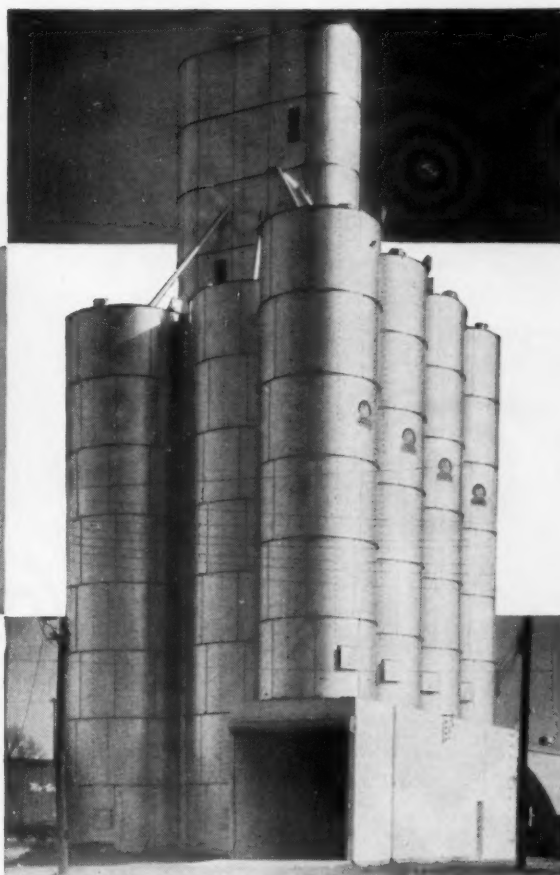


With today's harvesting time counted in weeks instead of months, speedy grain handling in a modern elevator is of vital importance. Large capacity may not be necessary if your elevator is highly efficient and modern... equipped for fast classifying and blending of grains.

Riverdale Grain Company's new Columbian all-steel elevator at Riverdale, Nebraska is an example of what you can do with relatively small capacity and high efficiency. The new 60,000 bu. capacity elevator, with 4 main tanks, 4 classifying and blending tanks and a headhouse is a "working house".

The new wider driveway and arrangement of tanks provides faster unloading, less waiting time for customers. With the elevator's services to growers and shippers expanded, Riverdale's old elevator adjoining, is still available for long storage or emergency capacity at peak demand.

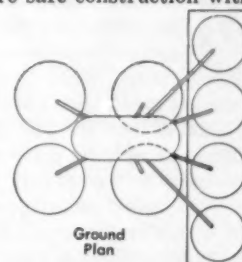
With such a modern Columbian bolted steel elevator, the small operator can meet the competition. Without it, the time is fast approaching when grain growers will pass him by for those who can handle



Another Columbian "New Look" Installation — Riverdale Grain Company of Riverdale, Nebraska, took this modern Columbian way to meet today's problems. Columbian designed and master-crafted this 60,000 bu. storage capacity elevator with four main tanks 15' x 61', and four tanks 12' x 48' for blending and classifying with an all-steel 9' x 24' x 43' headhouse. (Columbian also builds modern steel elevators with capacities well over 300,000 bu.)

his grain faster, store it more safely and efficiently. Columbian bolted steel elevators meet and comply with the new sanitary requirements for rodent-free, vermin-free storage. They provide fire safe construction with the extra strength of steel.

How long will a Columbian bolted steel grain tank last? No one knows. None has ever worn out. Not one has ever been demolished by a tornado or cyclone.



It's time to take a "New Look" at your present elevator — or the new one you are planning. Columbian engineers will be glad to help you. Write for the new Columbian Bolted Steel Grain Elevator Book.

COLUMBIAN STEEL TANK COMPANY

P. O. Box 4048U

Kansas City, Mo.

Associate Member, Grain & Feed Dealers National Association.

Member, American Dehydrators Association.



STEEL, Master-Crafted by Columbian... First for Lasting Strength



What is a County Agent?

He's an expert on cattle breeding. Soil conservation methods are his specialty. His knowledge of weed control techniques is deep. He's the man everyone comes to for help and advice because his knowledge of agriculture is so wide—and because he's so willing to share that knowledge. This is the County Agent.

More than 3,000 County Agents are serving in a like number of agricultural counties in the United States. What an outstanding record of service their's has been!

None of these men, all graduates of colleges of agriculture, has entered this profession to become rich. No amount of money could properly pay them for the work they do.

The County Agent loves agriculture. He enjoys a life devoted to helping those in agriculture. He derives satisfaction from being able to aid so many people in so many ways. Animal breeding, contour farming, fertilizing methods, youth group work, farm marketing, windbreak developing—all these are in the day's work to the County Agent.

Yes. A County Agent *has* to love agriculture to take on so strenuous and

demanding an occupation. Others, too, serve agriculture with all their hearts—the country doctor, the rural minister, the country editor, the county home agent—the list is long.

Backing up these people are others who serve in different ways—creative processors such as Cargill, for instance.

County Agents and a company like Cargill have much in common. Each is dedicated to agriculture. Each employs research and careful, painstaking work to help the farmer.

From this work come better markets for farm products and better products for the farm. These are the twin goals of creative processors such as Cargill—goals approved, we are sure, by the County Agent.

To win these goals, Cargill can do nothing without the farmer, the key man

on the farmer-creative processor team. For more than 90 years Cargill has had the No. 2 position on that team, a privilege it has valued. Together the "team" has contributed much to America and the free farm economy.

Cargill is grateful to the farmer for the chance to serve agriculture with him and with others in the farm community—the County Agent, for instance.



90 Years of
Creative Processing
of Farm Products

CARGILL

For free color reprints, suitable for framing, write Cargill, Inc., 200 Grain Exchange, Minneapolis 15, Minn.

LATE REPORTS

PROCESSING OPERATIONS. Reported by Bureau of the Census for January and February.

Primary products except crude oil at crude oil mill locations: Production, shipments and transfers, and stocks, February 1957-January 1957 (tons of 2,000 pounds)

	Production		Shipments and transfers		Stocks end of month	
	Feb. 1957	Jan. 1957	Feb. 1957	Jan. 1957	Feb. 26, 1957	Jan. 31, 1957
Soybean:						
Cake and meal	630,006	674,906	599,417	682,011	88,888	58,299
Flour	8,399	8,505	9,355	8,619	1,710	2,666
Lecithin	1,451	1,631	(NA)	(NA)	1,472	1,390

NA—Not available.

Soybeans: Net receipts, crushings, and stocks at oil mills, by states, February 1957-January 1957 (tons of 2,000 lbs.)

	Net receipts at mills		Crushed or used		Stocks at mills	
	Feb. 1957	Jan. 1957	Feb. 1957	Jan. 1957	Feb. 26, 1957	Jan. 31, 1957
U. S.	523,119	707,459	798,670	852,585	1,689,952	1,965,503
Illinois	160,532	314,477	284,225	309,163	596,048	719,741
Indiana	57,579	51,612	75,559	83,708	135,614	153,594
Iowa	93,918	127,228	127,707	131,060	146,541	180,330
Kansas	(1)	(1)	(1)	(1)	(1)	8,108
Kentucky	13,379	9,058	(1)	22,373	(1)	(1)
Minnesota	62,020	72,818	66,720	71,884	25,703	30,403
Missouri	14,333	25,388	24,678	32,152	85,094	95,439
Nebraska	(1)	(1)	(1)	(1)	(1)	(1)
North Carolina	1,497	3,448	6,326	6,350	34,024	38,853
Ohio	66,340	53,910	79,403	82,351	203,712	216,775
Texas	(1)	(1)	(1)	(1)	(1)	(1)
All other	53,521	49,520	134,052	113,364	463,216	522,260

¹ Included in "All other" to avoid disclosure of figures for individual companies.

Soybean products: Production and stocks at oil mill locations, by states, February 1957-January 1957

	Crude oil (thousands of pounds)				Cake and meal (tons)			
	Production		Stocks		Production		Stocks	
	Feb. 1957	Jan. 1957	Feb. 26, 1957	Jan. 31, 1957	Feb. 1957	Jan. 1957	Feb. 26, 1957	Jan. 31, 1957
U. S.	287,218	305,156	49,066	60,823	630,006	674,906	88,888	58,299
Illinois	105,893	113,944	15,342	21,000	217,041	237,932	25,313	17,940
Indiana	27,803	30,015	4,000	5,139	61,097	66,829	(1)	3,906
Iowa	45,624	47,291	7,468	8,415	105,436	107,944	13,196	8,953
Kansas	(1)	(1)	1,162	937	(1)	(1)	(1)	(1)
Kentucky	(1)	8,234	(1)	(1)	(1)	17,958	972	1,005
Minnesota	22,724	24,458	4,577	5,763	53,301	57,808	12,254	7,693
Missouri	8,846	11,643	1,067	2,548	20,174	26,416	3,766	2,491
Nebraska	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
N. Carolina	1,790	1,812	557	627	4,856	4,819	1,565	1,054
Ohio	27,745	28,426	3,557	3,802	63,853	66,199	4,210	3,208
Texas	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
All other	46,793	39,333	11,336	12,592	104,248	89,001	27,612	12,049

¹ Included in "All other" to avoid disclosure of figures for individual companies.

OILS EXPORTS. Exports of cottonseed and soybean oils from the United States in February were 123 million pounds, nearly one-fourth larger than in February 1956, according to preliminary Census Bureau data. This represents a decline from the previous month's level, but total exports October through February of 615 million pounds were still running over 40% ahead of last season. Cottonseed oil, soybean oil, oilcakes and meals: Preliminary estimates of exports, United States, in February 1957 and October-February 1956-57, and actual exports, February 1956 and October-February 1955-56.

Commodity	February 1956	February 1957 (Preliminary)	October-February 1955-56	October-February 1956-57 (Preliminary)
	Million pounds			
Cottonseed oil, refined	36.1	5.7	89.9	33.0
Cottonseed oil, refined and further processed	8.1	1.5	28.9	17.0
Cottonseed oil, crude	11.6	28.6	122.1	165.4
Total cottonseed oil	55.8	35.8	240.9	215.4
Soybean oil, refined	7.0	1.8	32.9	24.4
Soybean oil, refined and further processed	32.4	38.9	145.8	208.6
Soybean oil, crude	5.3	46.6	11.2	166.8
Total soybean oil	44.7	87.3	189.9	399.8
Total soybean and cottonseed oil	100.5	123.1	430.8	615.2
Thousand short tons				
Cottonseed cake and meal	4.9	.5	137.0	25.1
Linseed cake and meal	12.2	3.2	94.1	33.7
Soybean cake and meal	42.0	30.3	219.1	252.7
Total cake and meal	59.1	34.0	450.2	311.5

Exports of cottonseed oil showed a further drop in February, while soybean oil was double the February 1956 level and nearly as large as the record shipments in the preceding 2 months of the current marketing year.

In line with reports of slackening demand in Europe, exports of cake and meal of 34,000 tons in February were down sharply from recent levels, to less than two-thirds of exports in February 1956 and of the 1955-56 monthly average.

SUPPLY AND DISTRIBUTION of the 1953-56 soybean crops, reported by Agricultural Marketing Service (1,000 bu.)

Item	1953-54	1954-55	1955-56	1956-57
Carryover, Oct. 1	10,134	1,345	9,949	3,731
Production	269,169	341,075	373,522	455,869
Total supply ¹	279,303	342,420	383,471	459,600
Farm use including seed for season	25,160	24,000	30,000	30,000
Quantity remaining for processing, export or carryover	254,143	318,420	353,471	429,600
Disappearance, October through Feb. 28:				
Crushed for oil or processed ²	101,977	106,374	123,624	136,548
Exported	29,780	36,592	44,160	349,039
Total	131,757	142,966	167,784	185,587
Balance on Mar. 1 for processing, export, or carryover	122,386	175,454	185,687	244,013

¹ Imports negligible. ² No allowance is made for new crop crushings prior to Oct. 1. ³ Data for February estimated.

SHORTENING. Standard shortening shipments reported by the Institute of Shortening and Edible Oils, Inc., in pounds.

Feb. 16	22,763,641
Feb. 23	20,690,240
Mar. 2	21,811,997
Mar. 9	22,452,877
Mar. 6	21,309,780

Mitchell, Hutchins & Co.

SPECIALISTS IN COMMODITY FUTURES—

—CATERING TO THE SOYBEAN INDUSTRY

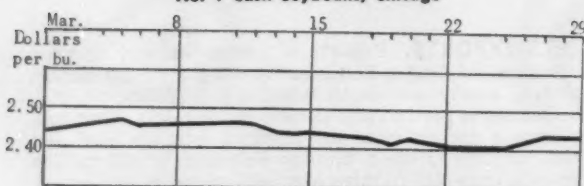
113 S. Court Ave.
Memphis, Tenn.
Jackson 7-1603

231 S. LASALLE ST.
CHICAGO 4, ILL.
STATE 2-1700

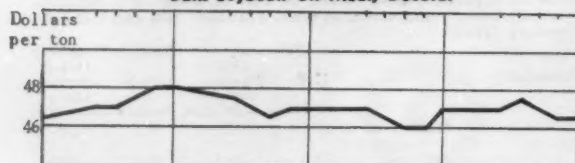
One Wall St.
New York, N. Y.
Digby 4-0700

DAILY MARKET PRICES

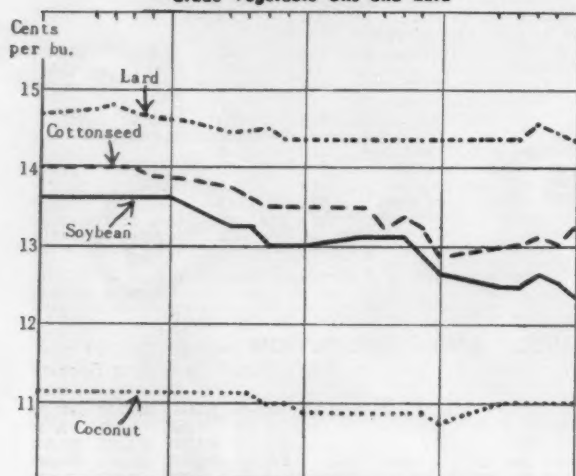
No. 1 Cash Soybeans, Chicago



Bulk Soybean Oil Meal, Decatur



Crude Vegetable Oils and Lard



March Markets

OIL MARKETS took a beating in March, with crude soybean oil basis Decatur declining from 14¢ to 12½¢ during the month. The trade was generally marking time waiting for new governmental action on fats and oils.

Soybean and meal markets were draggy affairs but there was little net change in the price level. Meal demand was slow with feed mixers operating only part time. Demand was given a shot in the arm by the big blizzard in the plains states in late March.

Soybeans, meal and oil were all selling below year-earlier levels at month's end.

Bearish factors in March:

1—Sluggish export demand for both soybeans and oil with uncertainty over the granting of additional P. L. 480 funds.

2—The U. S. Department of Agriculture Mar. 1 planting intentions report which indicated a somewhat larger soybean acreage this year. This was balanced, however, by a smaller cotton acreage.

3—The large volume of soybeans under support.

4—Reports of soybean processors closing their plants due to reported difficulty in obtaining beans and an unfavorable conversion ratio.

Bullish influences:

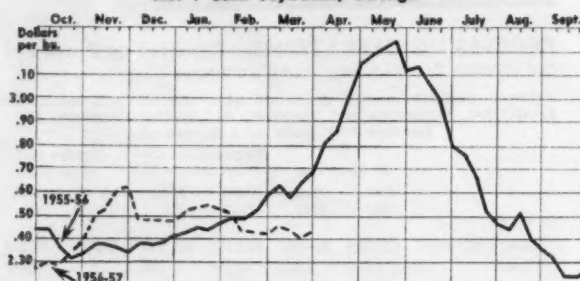
1—Light country marketings and the fact that processors have smaller supplies on hand than usual at this time of year, coupled with a continued big volume of processing operations.

2—New purchase authorizations for fats and oils for Spain, Italy, Turkey and Yugoslavia.

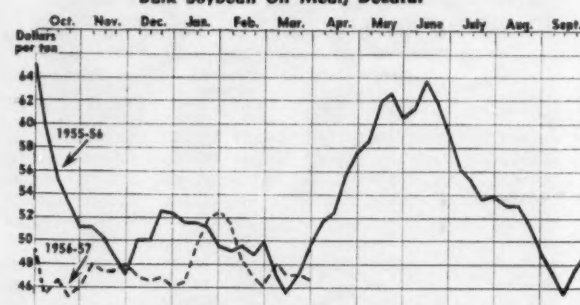
3—News that the Senate agriculture committee voted to allow a supplemental \$1 billion P. L. 480 money to dispose of farm commodities abroad.

TRENDS AT A GLANCE (Weekly Close)

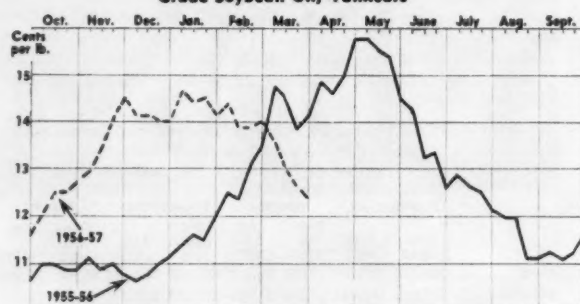
No. 1 Cash Soybeans, Chicago



Bulk Soybean Oil Meal, Decatur



Crude Soybean Oil, Tankcars



BYPRODUCTS. The price of soybean fatty acids remained at 15¼¢ per pound during March. Acid soybean soap stock delivered Midwest remained at 6½¢, and raw soybean soap stock advanced from 2½¢ to 2¾¢ per pound.

POSITION OF 1956 SOYBEAN CROP

Feb. 15, 1957 Feb. 15, 1956

Total soybeans placed under government support.. 65,439,000 bu. 30,133,000 bu.

Total soybeans withdrawn from support 8,024,000 bu.

Total remaining under support 57,415,000 bu.

1956-57 1955-56

Soybeans crushed Oct. 1-Feb. 28 136,548,000 bu. 123,624,000 bu.

Total soybeans inspected for overseas export including shipped to Canada Oct. 1-Mar. 22 52,243,120 bu. 44,241,097 bu.

Balance on hand for processing or export Mar. 1 244,013,000 bu. 185,687,000 bu.

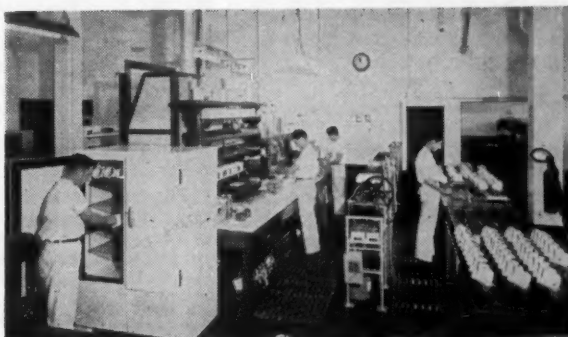
For details see "Late Reports" on preceding page and "In the Markets" beginning page 52.

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WASHINGTON DIGEST

Continued Dull Market Probable

OUTLOOK. A continued dull market for soybeans with prices drifting toward price support level is the prospect for the balance of this marketing season as seen by top USDA market men.

This assumes nothing critical turns up in the news such as a renewed threat of war, or a reblocking of the Suez Canal.

The outlook is based on large supplies on hand, and prospect of another big crop this year.

At the same time there is no real concern about soybeans among top USDA officials in terms of the longer pull. Even if carryover next October runs to 28 to 30 million bushels, officials would see no special reason to worry.

Cottonseed output will be down again next year. Around 3 million acres are signed up for the soil bank. Lard production may be up some. Soybean output may be about the same; possibly a little larger. Additional beans may well be needed next year to fill all requirements.

Most soybean officials think the 1957 crop will be larger than the 430 million bushels indicated by the intentions to plant report, which assumed 5-year average yields. Most estimates here run between 450 and 460 million bushels in 1957.

Actually, the soybean crop figure at average yields issued by the crop reporting board is not an estimate, but a service to provide some indi-

cation of volume under average conditions.

Even with a crop about like last year's and more carryover stocks than the industry has been in the habit of thinking of, officials believe the decks could be pretty well cleared of soybeans by the end of another season, in view of world needs.

For the short run there is disappointment in the partial closedown of some soybean processing plants at this time of year. However, officials think the crush has been coming along in excellent shape so far.

Through February, the crush has totaled 137 million bushels, or an average of about 27½ million bushels a month. February crush was 26½ million. Had it not been for several plant shutdowns, March might have totaled 30 million bushels.

If the average crush to date could be maintained for the balance of this season, the estimate of a 325-million-bushel crush still might be reached.

The edible vegetable oil movement also has set a fast pace so far this season. For the 5 months, October through February, approximately 616 million pounds have been moved into export. This is based on preliminary figures for February. The total compares with 431 million pounds last year.

The volume shipped in the last 5 months represents a half or more of total oil exports estimated for this



By PORTER M. HEDGE

Washington Correspondent for
The Soybean Digest

year—around 1.2 billion pounds. Total oil moved, including oil equivalent of soybeans, is estimated at over 2 billion pounds. Here are the figures:

From P. L. 480 and the International Cooperation Administration programs something over 700 million pounds of oil; non-program (commercial) shipments around 500 million pounds; oil equivalent of soybeans exported as beans, 850 million pounds.

No one has any clear idea how many soybeans may be taken over by Commodity Credit Corp. this summer. A total of 65,438,556 bushels from the 1956 crop went under price support.

The total breaks down as follows: Warehouse stored 30,348,046 bushels; farm stored 28,946,356 bushels; under purchase agreement 6,144,154 bushels.

Through Feb. 5 a total of 8,023,881 bushels had been withdrawn, leaving 57,414,675 bushels still under price support nearly a month ago.

P. L. 480. Another \$1 billion are reasonably sure to be approved by Congress for extension of the P. L. 480 export program another year. Senate agriculture committee has given it unanimous approval.

Though the new authorization probably will be held down to an added \$1 billion now, there may be efforts later on to increase the amount when there is less talk about reducing the budget.

Actual tonnage of farm products moved under P. L. 480 in the coming fiscal year may be larger than in the year closing June 30. The estimate for 1957 fiscal year is 7 million tons against 6½ million last fiscal year, and 4 million in fiscal year 1958.

This is because there is large backlog of commodities already purchased or negotiated for that has not yet moved. In terms of fats and oils products, new agreements as distinguished from new tonnage may well involve a smaller volume in the coming fiscal year than in the current one.



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QUARANTINE. A bill to amend and to improve the plant quarantine act has been approved unanimously by the full House agriculture committee, and reported to the House.

The bill was inspired by three pests that have been recently in the news—the soybean cyst nematode, the corn witchweed, and the fireant.

The bill would give the Department of Agriculture a somewhat stronger hand in cooperating with the states in plant and insect pest control than it has had in the past.

It would make possible, for instance, federal restriction of movement between states by requiring permits for movement of plant pests or pest plants.

It also for the first time could give USDA authority to compensate growers for damage necessarily done in control operations. The federal government does not have this in the present act.

For example: A good and sometimes essential control measure for the corn witchweed is to let the weed come up in the spring and then plow down. In the area where the weed occurs, however, the season is too late to plant corn after this control operation is carried out. Under the new bill a grower could be compensated for the loss of a crop he was unable to grow.

FOOD FATS. USDA has requested an increase of \$200,000 in research funds to dig into the question of the role of fats in human nutrition, and with particular reference to the relation of the level of cholesterol in the blood to the kind and quantity of fat in the diet.

Dr. Hazel Stiebeling, head of USDA's division of home economics research, told the House appropriations committee:

"I think there is no question but that not only diet but also our way of life is important in these matters. The stress and strain of modern living, coupled with our sedentary occupations, undoubtedly are factors.

"Certainly the Department of Agriculture needs to put itself in the position of being able to answer how much of different kinds of food products are needed for good nutrition, to show how products may be improved by processing for good nutrition, and how consumers can choose from our food supply in a way to safeguard health . . .

"The research we are contemplating is planned to determine the upper and the lower limits of different kinds of fats needed in diets under different nutritional situations.

"Now it is not a question of fat or no fat. We know that some fat is very important to nutrition. It is a question of what is the range in kind and quantity of fat that is desirable and advantageous, and how that range is affected by the rest of the diet.

"We need to know, for example,

whether we need some different proportion in the kinds of fats that we are now using, or whether in certain circumstances there should be less of some kind or more of other kinds, and how the rest of the diet will affect how much of these different fats can be used advantageously.

"We plan that this research would be closely coordinated with that of other agencies, both within the Department and outside. . . . Research in the place of fats in nutrition has been given top priority by at least four of the Department's research advisory committees. Everyone agrees that there needs to be close coordination by all the scientists who are working on different facets of this problem, so as to get ahead with the answers at the earliest possible moment."

Soybean Shippers Meet

MIDSOUTH SOYBEAN and Grain Shippers Association will hold its regular annual meeting in Hotel Peabody, Memphis, Tenn., Aug. 6 and 7, Paul C. Hughes, secretary, Blytheville, Ark., has announced.

Plans call for a cocktail party, buffet supper and dance the evening of Aug. 6, with the meeting Aug. 7.

The association recently protested at its midwinter meeting the announcement of the U. S. Department of Agriculture that it will sell take-over soybeans for the county loan rate plus 1½¢-per-month storage. "The Department has expressed a willingness to take a 12¢-per-bushel loss and . . . to sell cheaper than the farmer can sell these same loan soybeans," the association's resolution stated.

Elevator Margins Down

ELEVATOR MARGINS for handling grain are about 12% less than they were 5 years ago, according to R. J. Mutti, University of Illinois grain marketing specialist.

Mutti bases this conclusion on a study of 191 grain firms in northern Illinois made during 1955 and 1956.

The average difference between what an elevator paid for corn and sold it for was 3.3¢ a bushel. For soybeans, the margin was 6.1¢.

THE COVER PICTURE

COVER PICTURE this month shows a fine stand of young Clark soybeans on the farm of H. E. Ginger, Geneva, Ky., and is courtesy the Ohio Valley Soybean Cooperative, Henderson, Ky.

The stand was the result of planting 60 pounds certified seed per acre with a four-row corn drill set for 40-inch row. Seedbed was well prepared and planting date was around May 15.

SOYBEANS

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"Following YOUR market advices—tops in my opinion—have taken \$5,000 profit in SOYBEANS in past 3 WEEKS." LA.

"Sure did WONDERFUL with that \$5 subscription—OVER \$3,000 PROFIT so far, and if I had gone along on first couple of letters, would have done much better." OHIO.

"Am another satisfied customer. Made enough on JULY beans, FIRST WEEK I took service, to pay for service REST OF MY LIFE, and I figure on living a LONG time yet." IOWA.

"In 28 years in grain business, YOUR commodity-stock service was FAR THE BEST used during that period." NEBR.

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Send EVERYTHING mentioned above via air mail. Enclosed \$5.00 in full payment.

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We invite the readers of THE SOYBEAN DIGEST to use MARKET STREET for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here.

Rate 10c per word per issue. Minimum insertion \$2.00.

SEED—LEE SOYBEANS. MISSISSIPPI registered and certified hand-rogued Lee soybeans, very low mechanical injury if any. Moisture around 12%, purity 98 plus. Germination, run in March and April, 85 plus. These quality seed are the best that can be produced, dried, fumigated, processed and treated. Bagged in 1 or 2 bu. bags. Bard Selden, Hollywood, Miss.

FOR SALE—60 CU. FT. S. HOWES horizontal mixer, rebuilt, like new. Kelly Duplex molasses blender, used very little. 15 ft. Prater drag feeder, rebuilt. McLaughlin, Ward & Co., 409 S. 23rd St., Jackson, Mich.

SEED OATS—SOYBEANS, ALL varieties, certified and non-certified. Farmers & Consumers Seed Distributors, Box 672, Mason City, Iowa. Phone 409.

ONE SPROUT-WALDRON TYPE 49 Simplex pellet mill, complete with T.E.F.C. motor and explosion proof starter. Unit in excellent condition with several new dies. Write or call General Equipment & Manufacturing Co., Fort Dodge, Iowa.

NEW AND USED PORTABLE FEED mills. H. L. Myers, Route 3, Alliance, Ohio. Phone 7044.

FISCHBEIN BAG CLOSERS AND repair parts, in stock for immediate shipment. McLaughlin, Ward & Co., 409 S. 23rd St., Jackson, Mich.

LAUHOFF FLAKING ROLLS—AL-so single, double, two and three pair high roller mills. Ben Selby, 925 Montrose Ave., Chicago, Ill.

WANTED: FLAKING AND CRACK-ing rolls, meal coolers and driers and rollermills. Soybean Digest, Box 319-J, Hudson, Iowa.

FOR SALE—NEW OR USED 80600E or 80600H sewing machine heads, Whizzer conveyors, bagging scales and bins. Write Winborns, Williamsburg, Iowa.

STEEL GRAIN BINS—18 FT. x 16 ft. surplus government type steel bins, new, approximately 3,500 bushels capacity, available for your surplus storage problems. For particulars write: Midwest Steel Products Co., 121B Railway Exchange Bldg., Kansas City 6, Mo.

STEINLITE TESTERS, FACTORY rebuilt—reasonable. McLaughlin, Ward & Co., 409 S. 23rd St., Jackson, Mich.

FOR SALE—72-INCH FRENCH cookers, 10 x 42 three high cracking rolls, Anderson coolers, driers and Expellers, cake breakers, meal grinders, boilers, sewing machines. Ray L. Jones, 2222 Oakview Drive, Jefferson City, Mo.

SEED DIRECTORY

ARKANSAS

Burdette—G. A. Hale, Hale Seed Farms, 5,000 bu. registered Hale Ogden No. 2.

Keiser—Coleman Crews, 5,000 bu. certified Lee.

Osceola—L. C. Shelton, Rt. 3, Box 197, 2,000 bu. certified Lee.

Stuttgart—Jacob Hartz Seed Co., Inc., certified and uncertified Lee, certified and uncertified Jackson, uncertified Ogden, uncertified Dorman, uncertified JEW 45, uncertified Volstate, uncertified Mamloxi.

Twist—J. F. Twist Merc. Co., 7,500 bu. certified Lee, 4,500 bu. certified Dorman.

ILLINOIS

Ridgeway—Jones Farm Store & Elevator, 8,000 bu. Kingwa hay beans, 5,000 bu. Virginia hay beans, packed in 2-bu. bags.

St. Peter—Lester Grandt, 600 bu. Ill. registered No. 1 Lincoln, 600 bu. Ill. registered No. 2 Adams.

Waterman—Strever Seed & Grain Co., certified and uncertified Harosoy, uncertified Hawkeye, uncertified Lincoln.

INDIANA

Evansville 8—J. A. McCarty Seed Co., 526 N. W. Fourth St., certified and uncertified Clark, certified and uncertified Wash, uncertified Kingwa.

Linton—Ben Raney Farms, 370 E. Vincennes St., 2,300 bu. certified Clark.

Muncie—Gowin Farms, Rt. 1, 1,000 bu. certified Harosoy, 500 bu. certified Clark.

Valparaiso—Wyckoff Hybrid Corn Co., R.F.D., 2,500 bu. certified Harosoy, 500 bu. certified Hawkeye, 500 bu. certified Blackhawk, 300 bu. uncertified Richland, 500 bu. uncertified Monroe.

Walton—Geo. M. Hopper, Hopper Farms, Rt. 2, 500 bu. Indiana certified red tag Harosoy.

IOWA

Alden—Arthur Wall, Rt. 2, 350 bu. certified Chippewa.

Clear Lake—S. Kennedy & Sons, 1,800 bu. Iowa blue tag certified Chippewa.

MINNESOTA

Bird Island—A. A. Ziller, 2,000 bu. registered and certified Chippewa, 200 bu. registered and certified Grant, 400 bu. registered and certified Norchief, 400 bu. registered and certified Capital, 400 bu. registered and certified Ottawa Mandarin.

Boyd—Edwin Hawkinson, 200 bu. registered Grant, 500 bu. certified blue tag 1st generation Grant, 800 bu. certified blue tag Chippewa.

East Grand Forks—Ralph D. Larson, Rt. 2, 250 bu. certified Norchief.

Fairmont—Rollo Campe, Rt. 2, 500 bu. certified Chippewa.

Fairmont—J. H. Schrooten, Rt. 1, 4,000 bu. certified and registered Chippewa, 500 bu. certified Grant.

Hartland—Sig Borge & Son, 200 bu. certified Blackhawk, 250 bu. certified Chippewa, 125 bu. certified Grant, 125 bu. certified Ottawa Mandarin.

Herman—Adolph Dvornak, 200 bu. certified Grant, 350 bu. certified Chippewa.

Lake Crystal—Wayne Othoudt, 500 bu. certified Chippewa, 300 bu. certified Grant, 100 bu. certified Blackhawk, 200 bu. certified Ottawa Mandarin.

Lake Crystal—Richard E. Wigley, Rt. 2, 700 bu. certified Chippewa.

Madison—Merlin L. Knorr, 200 bu. certified Grant, 400 bu. certified Chippewa, 300 bu. uncertified Chippewa.

Mt. Lake—A. F. Loewen, Rt. 1, Box 81, 200 bu. certified Chippewa.

St. Peter—Gilbert F. Hoehn, Rt. 2, 800 bu. certified Chippewa, 500 bu. uncertified Renville.

West Concord—Victor Emerson, 300 bu. certified Grant, 250 bu. certified Chippewa.

MISSISSIPPI

Hattiesburg—Leo W. Klarr, Ellkay Farms, Rt. 1, 6,000 bu. certified and uncertified Jackson, 2,000 bu. certified and uncertified Lee, 1,000 bu. uncertified Dorman.

Hollywood—Bard Selden, 1,000 bu. Mississippi registered Lee.

Iuka—W. J. Brinkley, Box 218, 200 bu. certified Lee.

MISSOURI

Eureka—Emil L. Wallach, Rt. 1, 1,000 bu. certified Clark, January 1957 germination 84%.

St. Louis—Cypress Land Farms Co., 8129 Delmar Blvd., 2,000 bu. certified Clark, 500 bu. certified Clark, 2,000 bu. uncertified Ogden, 4,000 bu. uncertified Dorman, 500 bu. uncertified S-100, 500 bu. uncertified Perry.

NORTH CAROLINA

Selma—Gurley Milling Co., Box 488, Ph. 2303, 10,000 bu. uncertified Lee, 5,000 bu. certified Lee, 10,000 bu. uncertified Roanoke, 5,000 bu. uncertified Clemson 4s and 24s, 5,000 bu. uncertified JEW 45, 5,000 bu. uncertified Jackson, 2,000 bu. certified Jackson, 5,000 bu. uncertified Ogden, 2,000 bu. certified Ogden, 5,000 bu. uncertified Black Wilson, 5,000 bu. uncertified Otootan.

NORTH DAKOTA

Barney—Edd. Goerger, 1,000 bu. certified Capital, 1,000 bu. certified blue tag Norchief in bags, 300 bu. certified blue tag Chippewa in bags.

Leonard—Edw. F. Manthel, 3,000 bu. certified Hardome.

OHIO

Covington—Ebberts Field Seed Co., 5,000 bu. certified Hawkeye.

SOUTH CAROLINA

Hartsville—Boyd Hicks, Rt. 2, 400 bu. uncertified Lee.

Orangeburg—Shuler & Smoak, Inc., 3,000 bu. uncertified JEW 45, 1,000 bu. uncertified Clemson CNS 24.

St. Matthews—L. B. Wannamaker Seed Co., Box 194, 10,000 bu. certified Lee, 8,000 bu. certified Jackson, 3,000 bu. certified CNS 24, 10,000 bu. uncertified JEW 45.

SOUTH DAKOTA

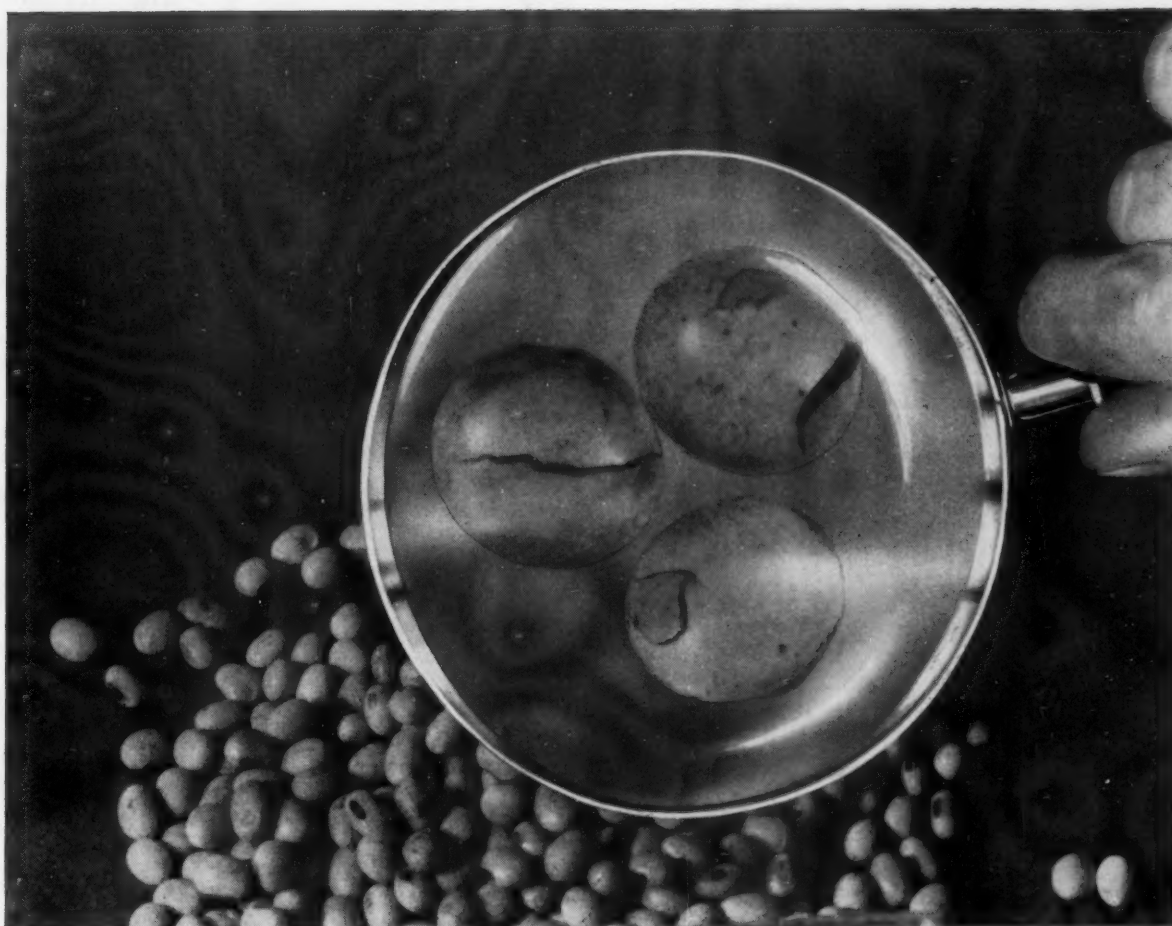
Aurora—Kennis Wheeler, 1,000 bu. certified Chippewa.

VIRGINIA

Richmond 16—T. W. Wood & Sons, 11 South 14th St., certified and uncertified Ogden, uncertified Early Wood's Yellow, uncertified Jackson, certified and uncertified Lee.

ONTARIO

Chatham—St. Clair Grain & Feeds Limited, Box 330, 2,000 bu. registered No. 1 Chippewa, 1,000 bu. registered No. 1 Lincoln, 1,500 bu. registered No. 1 Hardome.



• Magnified 6 times, these soybeans show the cracks (invisible to the naked eye) that admit disease organisms.

Your cracked soybean seed invites disease attack

**State tests show an average of
20% increase in stand with Du Pont ARASAN®**

The tiny cracks caused by harvesting make it easy for disease organisms to penetrate soybean seed. This can mean a costly percentage of seed that's killed before it sprouts—unless you insist on effective protection.

For a few cents an acre, treatment with Du Pont "Arasan" stops disease and helps your crop start clean and strong. It clings tight to seed, seals off


cracks, controls seed rot, mildew, purple stain and other diseases.

Improve your stand and yield by asking your treater for "Arasan" on every bushel you plant. "Arasan" formulations are also available in handy sizes for on-the-farm treating. Inoculate just before planting for top return from both treatments.

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FOR DOUBLE PROTECTION ON YOUR SEED...


Use Du Pont "Delsan" A-D where soil insects, as well as disease, are a problem. "Delsan" A-D is a combination treatment... contains "Arasan" to disinfect against disease and dieldrin to control soil insects.



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... THROUGH CHEMISTRY

ARASAN®

*Seed Disinfectants
and Protectants*



Your "Magic Key" to Bigger, Better Crops

IN THE MARKETS

FACTORY USE VEGETABLE OILS for December and January. Reported by Bureau of the Census (1,000 lbs.)

Primary materials: Factory production and consumption, and factory and warehouse stocks. January 1957-December 1956

	Factory production		Factory consumption		Factory and warehouse stocks	
	Jan. 1957	Dec. 1956	Jan. 1957	Dec. 1956	Jan. 31 1957	Dec. 31 1956
Cottonseed, crude	207,691	192,572	175,185	155,988	170,536	178,477
Cottons'd, refined	163,853	146,516	131,686	122,138	266,693	237,267
Soybean, crude	305,156	289,736	254,453	256,791	134,093	140,986
Soybean, refined	240,523	233,159	222,557	224,344	103,973	92,130
Hydrogenated vegetable oils—						
Edible:						
Cottonseed	46,176	47,233	41,502	42,210	22,535	21,195
Soybean	95,910	97,449	88,561	89,104	36,844	37,914
Other	6,820	5,164	4,988	3,560	2,873	2,621

Factory consumption of vegetable oils, by uses, during January 1957

	Edible products			Inedible products		
	Shortening	Margarine	Other edible	Soap	Paint and varnish	Lubricants and similar oils ¹
Cottonseed, crude						(3)
Cottonseed, refined	14,069	4,156	2,598		(3)	296
Soybean, crude				33	509	(3)
Soybean, refined	32,966	6,437	3,393		7,237	14
Foots, vegetable, raw and acidulated (100% basis)				2,442	191	803
Hydrogenated vegetable oils, edible:						
Cottonseed	12,534	27,480				
Soybean	26,008	61,592	939			(3)
Other	1,477		1,164			

¹ Includes quantities consumed in lubricants, greases, cutting oils, dielectric oils, core oils, brake fluids, and metal working. ² Quantities consumed in linoleum and animal feeds are included in the above totals. Data for fats and oils consumed in chemicals and linoleum and oilcloth, which were previously shown separately, are now included in "Other inedible" while quantities consumed in core oils, cutting oils, brake fluids, dielectric oils, and metal working, formerly included in this total, are now classified in "Lubricants and similar oils." ³ Not shown to avoid disclosure of figures for individual companies.

Consumption of vegetable foots in fat splitting

Jan.	1957		1956	
	Jan.	Dec.	Jan.	Dec.
	7,467	8,284		8,504

Source: U. S. Census Bureau.

EXPORTS. Preliminary data on U. S. exports of soybeans and soybean oil for January 1957, with comparable data for January 1956 and cumulative totals for the marketing years 1955-56 and 1956-57, reported by Foreign Agricultural Service, U. S. Department of Agriculture.

	Unit	January		October-January	
		1956	1957	1955-56	1956-57
Soybeans	bu.	6,793,678	7,924,802	41,517,321	44,039,484
Soybean Oil:					
Crude	lb.	1,126,020	43,617,901	5,931,921	120,177,036
Refined but not further processed	lb.	15,594,865	8,882,750	25,911,391	22,644,139
Refined, deodorized and hydrogenated	lb.	30,668,561	30,363,828	113,430,637	169,702,465
Total beans and oil, bean equivalent basis	bu.	11,362,462	16,554,973	55,509,551	73,583,549

Soybeans: Inspection for overseas export by ports and country of destination Feb. 18-Mar. 15, reported by Agricultural Marketing Service (bushels)

	Phila-delphia		Balti-more		Nor-folk		New Orleans		Port Allen, La.		Total
	bu.	Pct.	bu.	Pct.	bu.	Pct.	bu.	Pct.	bu.	Pct.	
Japan							674,833		659,830		1,334,663
Korea							164,910				164,910
Belgium					37,333		18,666		98,832		167,881
Holland	56,000	93,333	93,334				508,534		178,877		930,078
Philippines							352				352
Norway			38,080		112,000						150,080
Denmark	153,545						330,400				483,945
United Kingdom			56,000		19,040						75,040
Total	209,545	187,413	261,707		1,697,695		277,709		672,880		3,306,949

Title I, P.L. 480, export shipments July 1956-January 1957

Commodity	January 1957		July 1956-Jan. 1957	
	Metric tons	Lbs.	Metric tons	Lbs.
Cottonseed oil	144	318,000	35,504	78,273,000
Soybean oil	20,553	45,312,000	113,390	249,983,000
Linseed oil	94	208,000	268	591,000
Lard			6,799	14,990,000

OIL, MEAL EXPORTS. Exports of soybean oil from the United States in January of 91.4 million pounds were nearly as large as the alltime monthly record set in December, reports Foreign Crops and Markets.

With cottonseed oil exports in January close to the level of a year ago, combined exports of the two oils during the first four months of the current marketing year of nearly 500 million pounds were one-half again as large as in October-January 1955-56 and were equal to over 40% of total exports during the entire 1955-56 marketing year.

Heavy shipments under P. L. 480, principally to Spain, got under way earlier this marketing year than last.

Cottonseed oil, soybean oil, oilcakes and meals: Preliminary estimates of U. S. exports in January 1957 and October-January 1956-57, and actual exports, January 1956 and October-January 1955-56.

Commodity	January 1957		October-January 1956-57	
	1956	(Prelim-inary) 1955-56	(Prelim-inary) 1955-56	(Prelim-inary) 1955-56
	Million pounds			
Cottonseed oil, refined	12.2	4.5	53.8	33.9
Cottonseed oil, refined and further processed	8.8	5.4	20.8	9.0
Cottonseed oil, crude	35.3	39.6	110.5	136.8
Total cottonseed oil	56.3	49.5	185.1	179.7
Soybean oil, refined	15.6	8.7	25.9	22.5
Soybean oil, refined and further processed	30.7	39.1	113.4	169.4
Soybean oil, crude	1.1	43.6	6.0	120.2
Total soybean oil	47.4	91.4	145.3	312.1
Total soybean and cottonseed oil	103.7	140.9	330.4	491.8
	Thousand short tons			
Cottonseed cake and meal	15.3	2.5	129.0	24.6
Linseed cake and meal	17.1	6.7	81.8	30.5
Soybean cake and meal	35.6	50.1	177.2	222.4
Total cake and meal	68.0	59.3	388.0	277.5

Exports of soybeans in January are estimated on the basis of inspection returns, at 9 million bushels, up 2 million from last year. The 4-months total of about 45 million bushels compares with 41.5 million bushels in October-January 1955-56.

Exports of soybean cake and meal in January were still running considerably above those of last year, but this increase was not large enough to offset the decline in shipments of cottonseed and linseed cakes. Combined exports of cake and meal in October-January were down nearly 30% from last year.

INSPECTIONS. Soybeans inspected by grades and percent, as reported by Agricultural Marketing Service.¹

Grade	Oct.-Feb. 1955-56		Oct.-Feb. 1956-57		February 1956		January 1957		February 1957	
	1,000 bu.	Pct.	1,000 bu.	Pct.	1,000 bu.	Pct.	1,000 bu.	Pct.	1,000 bu.	Pct.
No. 1	38,859	20	30,828	16	6,187	29	4,495	18	2,341	16
No. 2	94,421	49	75,274	40	10,301	49	10,907	45	6,058	42
No. 3	39,653	21	44,680	24	3,057	14	4,895	20	3,425	23
No. 4	14,472	8	26,560	14	1,180	6	2,479	10	1,602	11
Sample	4,329	2	11,738	6	484	2	1,621	7	1,125	8
Total	191,734	100	189,078	100	21,209	100	24,397	100	14,551	100

¹ Carlot receipts have been converted to bushels on the basis that one carlot equals 1,750 bushels.

² Of the February 1957 receipts, 1,400 bushels were black, 2,100 mixed, and the remainder yellow soybeans. Inspections of soybeans in February included 2,636,000 bushels as cargo lots, 1,468,859 bushels as truck receipts, and the balance as carlot receipts. Based on reports of inspections by licensed grain inspectors at all markets.

JAPAN'S IMPORTS. Japan imported 26.4 million bushels of soybeans in 1956, the second largest quantity imported since the war years 1943-45, and only 3.3 million bushels less than the postwar record imports of 1955, reports USDA's Foreign Crops and Markets. Almost three-fourths of the total imports came from the United States, nearly one-fourth from China, and the remainder largely from Brazil.

Japan: Soybean imports, by country of origin, average 1935-39, annual 1950-1956 (1,000 bu.)

Country	Average 1935-39	1950	1951	1952	1953	1954	1955	1956 ¹
U. S.		3,490	10,766	5,948	15,017	16,273	21,019	19,696
China	² 21,567	3,982	233	23	897	1,704	7,478	6,128
Hong Kong		12	21	102	32			3
South Korea							42	
Brazil				65	499	675	1,149	449
Marianas, Marshalls and Carolines							7	
Others			368		31	5		101
Total	³ 22,220	7,484	11,388	6,138	16,476	18,657	29,695	26,377

¹ Preliminary. ² 1935-38 average. ³ 1935-39 country breakdown not available. Source: Annual Returns of the Foreign Trade of Japan, 1956 from customs division, Finance Ministry.

While China supplied all of Japan's soybean import requirements in prewar years, the United States since 1951 has provided by far the major portion. In fact, Japan has been the market for over one-third of the total U. S. soybeans exported in the last 6 years.

Japan: Soybean imports by months and by country of origin, 1956¹ (1,000 bushels)

Month	U. S.	China	Brazil	Others	Total	Month	U. S.	China	Brazil	Others	Total
Jan.	3,350	301	203	...	3,854	July	1,944	1,702	...	51	3,697
Feb.	3,479	587	73	4	4,143	Aug.	1,805	713	39	9	2,566
Mar.	1,866	253	...	...	2,119	Sept.	1,337	186	55	38	1,616
April	339	506	²	...	845	Oct.	5	9	19	...	33
May	639	784	27	2	1,452	Nov.	258	4	33	...	295
June	1,991	611	...	...	2,602	Dec.	2,683	472	...	²	3,155
Total							19,696	6,128	449	104	26,377

¹ Preliminary. ² Less than 500 bushels. Source: Customs division, Finance Ministry.

Over one-half of the total 1956 imports moved into Japan in the 4 months of January, February, July and December and almost one-third in January and February alone.

STOCKS. Agricultural Marketing Service's commercial grain stocks reports for close of business on Friday or Saturday preceding date of report (1,000 bu.)

	Mar. 5	Mar. 12	Mar. 19
U. S. grain in store and afloat at domestic markets			
Atlantic Coast	1,603	1,622	1,496
Gulf Coast	731	817	1,275
Northwestern and Upper Lake	1,536	1,355	1,304
Lower Lake	5,629	5,670	5,329
East Central	1,416	1,329	1,287
West Central			
Southwestern & Western	693	617	584
Total current week	11,608	11,410	11,275
Total year ago	22,352	22,419	22,425
U. S. Soybeans in store and afloat at Canadian markets			
Total current week	227	227	227
Total year ago	533	493	469
Total North American commercial soybean stocks			
Current week	11,835	11,637	11,502
Year ago	22,885	22,912	22,894

Primary receipts (1,000 bu.) of soybeans at important interior points for week ending:

	Mar. 1	Mar. 8	Mar. 15
Chicago	243	207	202
Indianapolis	70	84	75
Kansas City	33	16	28
Minneapolis	76	105	71
Omaha	11	6	7
Peoria	18	31	23
Sioux City	4	17	33
St. Joseph	6	11	9
St. Louis	13	42	17
Toledo	61	61	49
Totals	535	580	514
Last year	1,580	1,466	1,276
Total Chicago			
Soybean stocks	4,966	4,525	4,159



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OILSEED MEALS. Consumption of oilseed meals the first 3 months of the 1956-57 season increased by nearly 280,000 tons and totaled 2,889,000 tons, reports Agricultural Marketing Service.

Most of the increase was in the consumption of soybean oil meal which was at a record level and totaled 1.8 million tons, an increase of 264,000 tons. Cottonseed meal supplies at 887,000 tons were only slightly under the year earlier.

Exports of oilseed meals, October through December, at 220,300 tons, were 100,000 tons below the comparable period a year ago. Imports of oilseed meals totaled 29,000 tons the first quarter of the season, an increase of 7,500 tons.

Supplies for feed October-December 1956 with comparisons¹ (1,000 tons)

	Oct.-Dec. 1955	Oct.-Dec. 1956	Oct.-Sept. 1954-55	Oct.-Sept. 1955-56	Oct.-Sept. 1956-57 estimated
Soybean	1,534.1	1,798.4	5,425.6	6,041.6	7,000.0
Cottonseed	890.2	887.1	2,404.7	2,514.1	2,250.0
Linseed	138.8	153.8	486.7	439.0	450.0
Peanut	3.6	4.2	17.7	38.0	40.0
Copra	42.8	45.5	181.9	159.7	160.0
Total oilseed meals	2,609.5	2,889.0	8,516.6	9,192.4	9,900.0

Feed grains and feedstuffs: Index numbers and average price per ton in wholesale lots at principal markets (dollars)

	5-year 1950-54 average	Feb. 1956	Dec. 1956	Jan. 1957	Feb. 1957	Feb. 26 1957	Pct. Feb. 26 index and price is of 5-year av.
Soybean meal	87.80	64.50	64.20	66.70	63.80	62.40	71
Cottonseed meal	78.05	60.50	64.30	64.90	63.65	62.95	81

PRICE SUPPORT. 1956-crop soybeans put under price support and loans withdrawn from support as of Feb. 15 and totals for 1955-56 season, reported by Agricultural Marketing Service, USDA (1,000 bu.)

Quantity put under loan			Quantity of loans with- drawn from support	Pur- chase agree- ments	Total put under support 1955-56 ¹	Total put under support 1955-57 ¹
Farm stored	Ware- house stored	Total				
28,947	30,348	59,295	8,024	6,144	65,439	30,133

¹ Total placed under price support is the sum of the total put under loans and purchase agreements through Feb. 15.

Soybeans: Quantity of 1955 and 1956 crops put under price support, by states² (1,000 bushels)

State	1955 crop	1956 crop ²	State	1955 crop	1956 crop ²
Ala.	35	13	Mo.	2,302	5,339
Ariz.	0	1	Nebr.	95	185
Ark.	786	1,761	N. J.	5	7
Del.	4	6	N. Y.	1	(³)
Fla.	(³)	2	N. Car.	38	104
Ga.	30	28	N. Dak.	243	840
Ill.	4,796	14,080	Ohio	731	2,022
Ind.	1,331	3,231	Okla.	36	16
Ia.	9,702	18,870	Pa.	(³)	2
Kans.	71	137	S. Car.	352	292
Ky.	46	168	S. Dak.	217	497
La.	5	23	Tenn.	269	571
Md.	5	3	Tex.	3	2
Mich.	62	145	Va.	2	3
Minn.	8,601	16,430	Wis.	20	62
Miss.	345	599	Total	30,133	65,439

¹ Loans and purchase agreements available through Jan. 31.
² Reported as of Feb. 15. ³ Less than 500 bushels.

PRICES. Average prices for soybeans received by farmers, effective parity, and support rate (dollars per bushel), reported by Agricultural Marketing Service.

Average farm price			Effec- tive parity	Av. price as percent of parity	National average price support rate		
Feb. 15 1956	Jan. 15 1957	Feb. 15 1957	Feb. 15 1957	Feb. 15 1957	1955 crop	1956 crop	1957 crop
2.25	2.31	2.25	3.00	75	2.04	2.15	2.09



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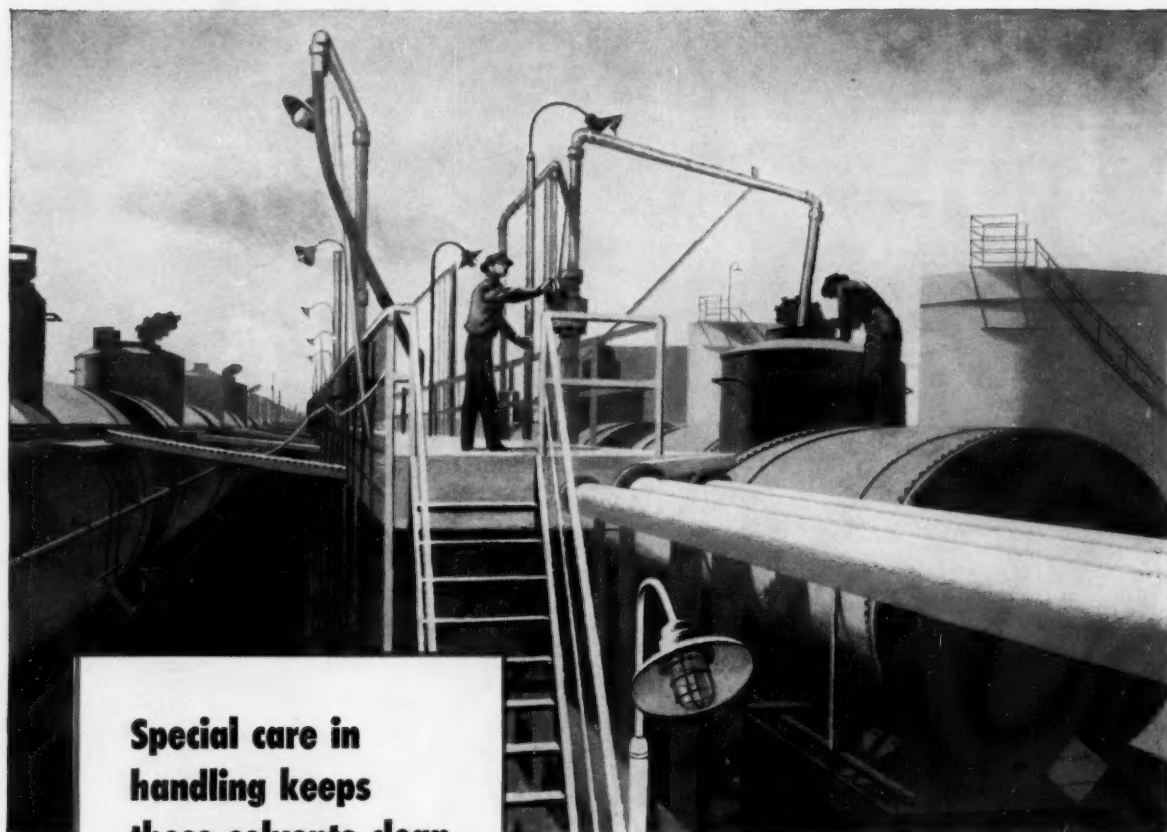


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